

THE MEROITIC LANGUAGE AND WRITING SYSTEM



CLAUDE RILLY
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THE MEROITIC LANGUAGE AND WRITING SYSTEM

This book provides an introduction to the Meroitic language and writing system, which was used between circa 300 BC and AD 400 in the Kingdom of Meroe, located in what is now Sudan and Egyptian Nubia. This book details advances in the understanding of Meroitic, a language that until recently was considered untranslatable. In addition to providing a full history of the script and an analysis of the phonology, grammar, and linguistic affiliation of the language, it features linguistic analyses for those working on Nilo-Saharan comparative linguistics, paleographic tables useful to archaeologists for dating purposes, and an overview of texts that can be translated or understood by way of analogy for those working on Nubian religion, history, and archaeology.

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Preface

Since the beginning of this millennium, the study of the Meroitic language and writing system has seen substantial advances. The publication of the *Répertoire d'Épigraphie Méroïtique* in 2000 greatly facilitated the study of Meroitic epigraphy. With these volumes, two books by Claude Rilly from 2007 and 2010 stand out as well. The first provided a new analysis of the Meroitic language drawing all the insights on phonology, morphology, and syntax together and adding valuable paleographic tables of the Meroitic writing system that became immediately useful to archaeologists in Sudan. The second delivered a historical linguistic analysis of Meroitic and its closest relatives, leading the way for new advances with the help of historical reconstructions. All these studies together have provided a solid foundation for future study.

The present work addresses a problem of access. The study of Meroitic is multifaceted and includes epigraphy, paleography, and linguistics. Egyptologists, linguists, and Africanists are interested in the contents for a diverse set of reasons. However, the volumes mentioned earlier are neither introductory nor accessible to those who do not understand French. This excludes not only many Africanists but also many Sudanese scholars and students who wish to learn more about their cultural heritage. A translation of the thousands of pages that were generated in the last decade would undoubtedly be useful, but the field of Meroitic studies also lacks a synthesis that would be accessible to Egyptologists, linguists, and Africanists. This volume addresses this lack by focusing on the latest results rather than the debates that led to these results. Maps, figures, and a Glossary help the various users to gain insight in different ways. The result that is presented here is a book that is a complete resource, brought up to date in a field that is continuously developing. Where necessary, it refers to the important works of the last years for those who wish to review the analyses or access the data that have advanced the field to where it is today. It allows those with

different backgrounds to gain substantial knowledge of Meroitic, the language of Kush, which is only slowly giving up its secrets.

The authors would like to stress that if the present volume is perhaps long enough to encapsulate the results of the two books in French (Rilly 2007 and 2010), it is still unable to give a detailed account of such points as the paleographical data, the semantic analysis of texts that led to new translations, and the discussion of all the particular words in Nubian, Taman, and Nyima in the lexical list given in the Appendix. For all these details, curious readers and specialists can refer to the original French books.

In addition to the two authors, a host of people have been important in making this book possible. We owe particular thanks to Connie Dickmeyer, who made many improvements to the text, and Jennifer Steffey, who generated most of the illustrations, including the cover drawing. Friends and colleagues, including Greg McDonald, Gabrielle Tieu, Jacki Lacey, and Vincent Francigny, were frequently bothered with questions of various kinds and always provided the moral support necessary for finishing a task that was overwhelming at the start and remained so close to the end. Finally, we thank the people at Cambridge University Press, in particular Beatrice Rehl, whose immediate and continuous support for this project has provided the rare energy to deliver this book within a reasonable time.

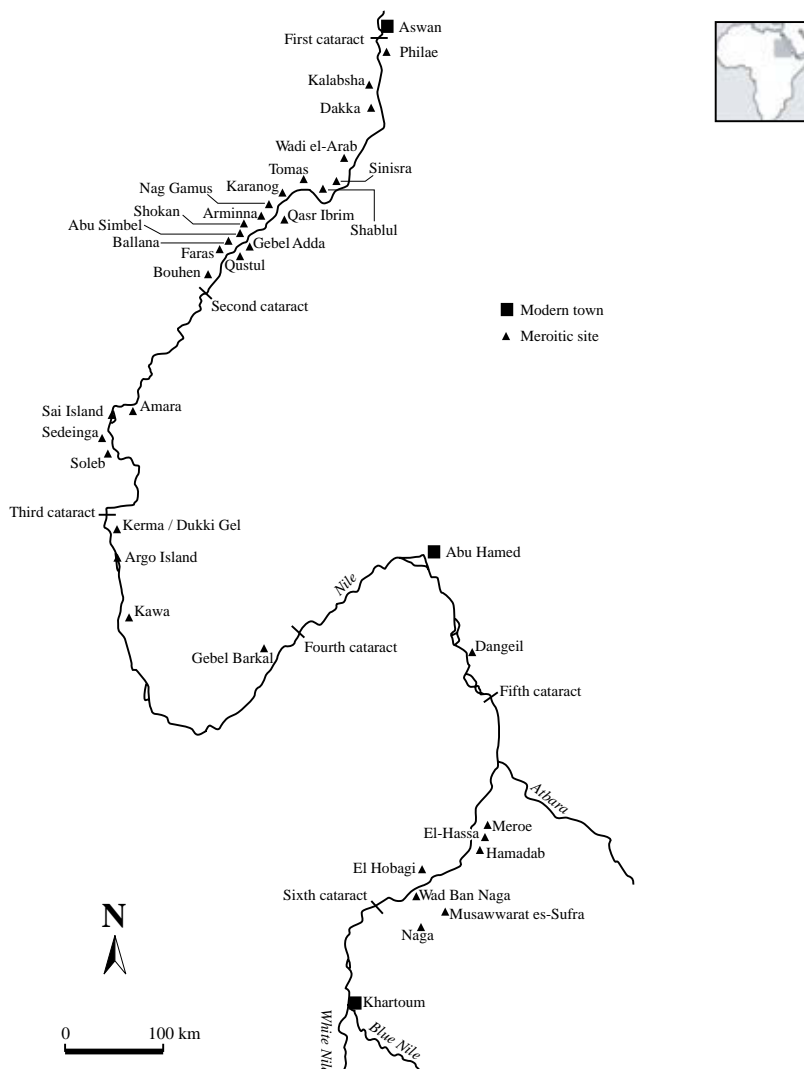
I Introduction: History and Texts

A. HISTORICAL SETTING

The Kingdom of Meroe straddled the Nile in what is now known as Nubia from as far north as Aswan in Egypt to the present-day location of Khartoum in Sudan (see Map 1). Its principal language, Meroitic, was not just spoken but, from the third century BC until the fourth century AD, written as well. The kings and queens of this kingdom once proclaimed themselves pharaohs of Higher and Lower Egypt and, from the end of the third millennium BC, became the last rulers in antiquity to reign on Sudanese soil.

Centuries earlier the Egyptian monarchs of the Middle Kingdom had already encountered a new political entity south of the second cataract and called it “Kush.” They mentioned the region and the names of its rulers in Egyptian texts. Although the precise location of Kush is not clear from the earliest attestations, the term itself quickly became associated with the first great state in black Africa, the Kingdom of Kerma, which developed between 2450 and 1500 BC around the third cataract. The Egyptian expansion by the Eighteenth Dynasty (1550–1295 BC) colonized this area, an occupation that lasted for more than five centuries, during which the Kushites lost their independence but gained contact with a civilization that would have a lasting influence on their culture.

During the first millennium BC, in the region of the fourth cataract and around the city of Napata, a new state developed that slowly took over the Egyptian administration, which was withdrawing in this age of decline. From 750 BC onward, all of Nubia would be Kushite again, and, in 732, the Kushite king, Piankhy, subjugated both Nubia and Egypt to Amun, the central deity of Napata and Thebes. His brother and successor, Shabaqo, is considered the first pharaoh of the Twenty-fifth Egyptian Dynasty, also called the “Ethiopian” dynasty after the Greek name for Sudan, which is today referred to as “Kushite.” This domination by Egypt lasted until the



Map 1: Principal Meroitic sites

defeat of pharaoh Tanwetamani in 662 BC by the Assyrians. After that, the Kingdom of Kush was confined to its territory between the cataracts.

A new era arrived without political or cultural upheaval during which “Kush” came to be ruled by the kings of Napata. It is there, not far from the holy mountain of Gebel Barkal, that the new monarchs were buried in the pyramids of the Nuri necropolis. The main events of this history can be understood with the help of the local inscriptions that were written in the Egyptian language and script.

About three hundred kilometers southwest of Napata, where the city of Meroe had already existed for nearly two centuries, a new development took place around 300 BC. It was not a clear cultural break with the previous period, and Napata remained the religious metropolis. Instead, the Kingdom of Meroe gradually distanced itself from Egyptian influences. There arose an official cult with long-known indigenous deities such as the lion god, Apedemak. They developed a local writing system for the Meroitic language, which, up until then, had not been written, apart from geographical and proper names transcribed in Egyptian script.

The end of this Meroitic kingdom came about in the fourth century AD; the circumstances of its demise are not clear to present-day historians. The power of the kingdom was lost, or perhaps divided, with the onslaught of the Noba, the ancestors of the Nubians of later days, and through incursions from the Ethiopians of Axum. By the time the Byzantine missionaries introduced Christianity in the sixth century AD, the old territory of Meroe had been divided into three kingdoms ruled by Nubian elites: Nobadia in the North, Makuria in the center, and Alodia in the South. Under Christianity, Meroitic civilization eventually disappeared from the historical record.

B. PREVIOUS RESEARCH

In 1819, the French-German architect Franz Gau, unknowingly, became the first to copy a Meroitic text when reproducing an inscription from the temple of Dakka. Frédéric Cailliaud from Nantes in France, passing by the great temple of Soleb in 1821, discovered an inscription he recognized as “Ethiopian,” that is, Sudanese. But most important of all, through his long expedition from 1842 to 1845 through Nubia, is the great Prussian Egyptologist Carl Richard Lepsius. He collected a number of texts, which he published in the *Denkmäler aus Aegypten und Nubien*. Although he was unable to decipher the script, he proposed that it was some form of ancient Nubian, a language to which he had dedicated considerable research with the publication of *Nubische Grammatik* in 1880. Between 1874 and 1881, there appeared studies of Nara (Barya), Beja, Nubian, and Kunama that became the first descriptions of African languages of their time. One can safely state that African linguistics is indebted to the research instigated by Lepsius in his attempt to reach a translation of Meroitic.

After the unfruitful attempts of Heinrich Brugsch (1887) and Archibald H. Sayce (1911), the decipherment of the Meroitic script became the work of the British Egyptologist Francis Llewellyn Griffith. After collecting at least a hundred texts, he made a systematic comparison. With the help of parallel versions of Egyptian and Meroitic, he found that Meroitic hieroglyphs

were written in the opposite direction, a characteristic that had escaped his predecessors. The value of the signs was deciphered, but the vocabulary remained incomprehensible apart from names of people and deities, titles, and place-names. His philological method, based on a detailed examination of each text and cross-checking commonalities between one text and another, would have awarded him much progress if he had not been equally occupied with his immense and fruitful Egyptological work.

A few decades later, in 1930, the Austrian Egyptologist Ernst Zyhlarz published “Das meroïtische Sprachproblem,” in which he made many phonological, syntactic, and morphological comparisons. He was a student of Carl Meinhof, who suggested that certain African languages, one of them Meroitic (Meinhof 1921/22), were part of a group called “Hamitic” and not just “negroid” languages that were primitive. Zyhlarz confirmed the classification “Hamitic” for Meroitic and is thought to have found traits that they had in common. He analyzed a Meroitic inscription of Philae (REM 0101) and boldly presented an approximate translation. After the death of Griffith in 1934, it would not be until the 1950s that more serious attempts at understanding Meroitic would be undertaken.

It was after the Second World War that new research was launched. The main figure was the German Egyptologist Fritz Hintze, who would dominate Meroitic studies for the next thirty years. He sought to apply models inspired by generative linguistics through comparisons of funerary texts. Although it was admirable work, the results in terms of translations were rather limited.

During the sixties and seventies the construction of the Aswan Dam threatened Nubian monuments, and UNESCO launched a salvage campaign. Research internationalized, and specialized journals were set up to document the progress (*Meroitica* in Berlin, *Meroitic Newsletters* in Paris). The Canadian Bruce G. Trigger applied the methods devised by Joseph Greenberg to the study of Meroitic and classified the language as “Nilo-Saharan,” a newly created language group, rather than “Hamitic.” Hintze showed, however, that the translations of the Meroitic words that were used by Trigger had frequently been inaccurate and based on the unreliable work of Zyhlarz. Then the Frenchmen Jean Leclant and André Heyler launched a project for the long term. They entered the texts into computers under the name *REM* (*Répertoire d'Épigraphie Méroïtique*). The death of Heyler in 1971 stalled the project, which was not revived until recently (Leclant et al. 2000). A detailed catalogue has been the sole result, while the transliterations are still waiting for attention.

Only a Viennese group that convened around Inge Hofmann and the Groupe d'Études Méroïtiques in Paris have continued to publish regularly

on Meroitic. Elsewhere, progress has been slow, no new researchers have entered the stage, and no new inscriptions have been published in sufficient quantity to break new ground. From 1991 to 2007, there were no monographs on the Meroitic language. But since then, two volumes with the latest discoveries have been produced in French; they have reinvigorated the discipline and should inspire future research. This English-language volume is a synthesis of these two works and a handbook for those interested in the field.

C. HISTORY OF THE MEROITIC LANGUAGE AND SCRIPT

The Meroitic language, despite its name, was not limited to the Kingdom of Meroe. It was previously thought that the language appeared in some form during the first Kingdom of Napata at the beginning of the first millennium BC and that it disappeared in the fourth century AD. Hofmann (1981a, 1981b) sets the birth of this language during the Eighteenth Dynasty. Instead, it has recently been demonstrated that Meroitic appeared in one form or another as early as the third millennium BC at the time of the Kingdom of Kerma.

When the Egyptians entered Nubia during the Middle Kingdom, circa 2000 BC, they encountered two types of languages. The rendering of the names of rulers that appear in the Egyptian texts (Posener 1940, Koenig 1990) indicates that one of these languages concerns the Medjay. Their language has a relatively high number of consonants, similar to what is found in Egyptian. The other is “Kush,” which has only a dozen consonants. The “Kush” names also do not have a single fricative except /s/. Although the corpus is limited, the two languages can be tentatively classified as Hamito-Semitic (Berber or Cushite), in the case of Medjay, and Nilo-Saharan (Eastern Sudanic), in the case of “Kush.” Unfortunately, linguists have used the term “Cushite” for a group of languages unrelated to “Kush.”

There is clearer evidence of early Meroitic in a document that was written in hieratic, the Golenischeff papyrus (cf. Erman 1911, Vernus 1984). It dates to the end of the era in which the Hyksos reigned in northern Egypt (around 1570 BC) and contains a list of fifty-seven foreign names carefully transcribed in syllabic script. The syllabic signs that were used made it possible for the scribes to enter the correct vowels in these non-Egyptian words. The resulting words are clearly proto-Meroitic, not only because they can be easily recognized through the original consonant system but also because there are entire words that contain names of two Meroitic deities: Mash (sun god) and, perhaps, Apedemak (creator god).

Contrary to the opinion of Erman in 1911, this list is not a record of slaves, since in such a case the names were not likely to be given in such phonetic detail. They were more plausibly ambassadors on a mission. The papyrus in question is from Crocodilopolis in the Fayum, a starting point on the string of oases that connected Lower Egypt and Kush. The ruling Hyksos had excellent relations with Kerma because both were opposing the Seventeenth Dynasty in Egypt. Since the Kingdom of Kerma was founded around 2450 BC and did not undergo dramatic cultural changes until the Hyksos period, the Meroitic language is likely to have existed since the third millennium.

From the Eighteenth Dynasty onward, the presence of the Meroitic language in Nubia quickly expands in the Egyptian texts. There is a servant's name that reads, "beautiful is the Kushite" (Hofmann 1981b); there is an ostrakon from the Rameses era (eleventh century BC) that states that "on the land of Kush" a goddess is given a name that contains the radical *mk*, meaning "divinity." Ultimately, from the same period (see Zibelius-Chen 2005), there are supplementary Chapters 163–165 of the Book of the Dead with entire phrases in Meroitic that can, at least partially, be understood despite the Egyptian phonological rendering of the words.

During the Twenty-fifth Dynasty and the Kingdom of Napata, there remained some traces of Meroitic in proper names even though the administrative language was Egyptian. In the reign of Aspelta (around 600 BC), a rather interesting practice emerged. The transcriptions and hieroglyphs of certain Meroitic lexical elements appeared in proper names, for example, *mlo* "good," *mk* "divinity," and *mte* "child." They were accompanied by determinatives or Egyptian ideograms that corresponded with their meaning: the heart and the trachea for *mlo*, the flag for *mk*, and the figure of a child sucking its thumb for *mte*.






















































From the second century BC onward, the development of the language can be traced in its entirety through the Meroitic writing system. Contrary to the Egyptian case, the cursive writing appeared first, probably to fill a commercial and administrative need. Inspired by Demotic writing, a script commonly used in Egypt during this time, Meroitic reads from right to left. The oldest examples are from Dukki Gel, near Kerma, and were used for pious graffiti on the walls of the temple of Amun. Not much later, toward the end of the second century, this script was enlarged with a hieroglyphic version reserved for religious and royal texts. The signs were taken from Egyptian, but the sound values in Egyptian were changed. For instance, , which corresponds to Egyptian *s3*, is read as /ka/ in Meroitic. Also, the reading direction is opposite to that in Egyptian with the signs facing the end of the sentence rather than the beginning.

Table 1.1: The Meroitic script

Hieroglyphic	Cursive	Transliteration	Value
		<i>a</i>	initial /a/ or /u/
		<i>b</i>	/ba/
		<i>d</i>	/da/
		<i>e</i>	/e/, /ə/, no vowel
		<i>x</i>	/ya/
		<i>h</i>	/ɣ ^w a/
		<i>i</i>	modifier /i/
		<i>k</i>	/ka/
		<i>l</i>	/la/
		<i>m</i>	/ma/
		<i>n</i>	/na/
		<i>ne</i>	/ne/, /nə/ or /n/
		<i>o</i>	modifier /u/
		<i>p</i>	/pa/ (?) or /ba/
		<i>q</i>	/k ^w a/
		<i>r</i>	/ra/
		<i>s</i>	/sa/
		<i>se</i>	/se/, /sə/ or /s/
		<i>t</i>	/ta/
		<i>te</i>	/te/, /tə/ or /t/
		<i>to</i>	/tu/
		<i>w</i>	/wa/
		<i>y</i>	/ya/
		<i>:</i>	separator

1. The Script

Whether cursive or hieroglyphic, the Meroitic script is not a system of consonants and ideographic signs as in Egyptian. Instead it is a syllabary with a default vowel /a/, also known for the Brahmi script in India, for instance. The following serves as a first introduction to the system of writing and an overview of its signs (see Table 1.1).

The system of writing is known as alphasyllabic, or abugida. Each consonant has an inherent vowel, in Meroitic read as /a/. Therefore , normally transliterated as *k*, is read /ka/. For another vowel value, it is necessary to add a vowel modifier:  for /e/,  for /i/,  for /u/ (and perhaps /o/). This system is practical and efficient for sequences of the type CVCV (CV = consonant followed by vowel). But, as in certain Indian scripts, a problem presents itself for word-initial vowels and consonant clusters. Historically,

the Meroites have chosen to use the modifier S *e* when representing a consonant without a vowel, but this may lead to obvious ambiguities.

There are four supplementary signs that do not have a vowel /a/. They have a fixed vowel value and cannot be followed by a vowel modifier: A *ne*, $\text{L}///$ *se*, $\text{I} \text{ 5}$ *te*, L *to*. These syllables correspond to common morphemes in the Meroitic language, a correspondence that explains their resistance to conforming to the norm.

Word-initial vowels are more complex in the system. The transcriptions have evolved strongly in the course of the centuries. In short, the sign $\text{S} \text{ 2}$ is transliterated *a* and serves to write both initial /a/ and /u/. The initial vowels /e/ and /i/ are written with the corresponding vowel modifiers S *e* and L *i* in combination with $///$ *y*. So the group $\text{S} ///$ *ye* and $\text{L} ///$ *yi* with the $///$ *y* in initial position are graphic rather than phonetic representations.

Finally, the Meroitic script has a separator sign transliterated “:” which allows different words and word groups to be separated, but this is seldom done systematically.

The Meroitic writing system is a local creation, probably inspired by the Egyptian “syllabic orthography.” Its influence is not Semitic, Greek, or Geez. In the first two cases, the principle of writing is completely different, and in the case of Geez, which resembles the system of Meroitic much more, the shape of the signs is unrelated. Also the date of its first appearance favors a Meroitic invention.

The Meroitic script continued to be used until the fifth century AD, that is, if the latest dating is taken to be correct. The inscription of King Kharamadoye (REM 0094), inscribed on a temple column of Kalabsha in Lower Nubia, is considered the latest attestation of Meroitic writing. It was thought to date to the fourth century, but a new analysis of the succession of kings (see FHN III: 1103–1107) by László Török has now placed the inscription around AD 420. The orthography is curious, with archaic forms and assimilations that characterize a script in decline. It is possible that an ancient stele served as a model but that only part of the texts was used.

The end of the Meroitic language and writing system is as little understood as the end of the Meroitic Kingdom. There are, however, two or perhaps three signs that appear in the Old Nubian alphabet: the nasal palatal p [ɲ] that derives from Meroitic A *ne*; the w that is from Meroitic S *w*; and v [ŋ], the velar nasal that is either the Meroitic L *x* or a modified Greek gamma.

The oldest documents using the Old Nubian script date to the end of the eighth century AD, indicating that the Meroitic signs continued to be read at least two centuries after the Kharamadoye inscription. Perhaps one

day, in Sudanese archaeology, other evidence will fill in the gaps in our understanding of this history.

D. PHONETIC VALUES AND THE PHONOLOGICAL SYSTEM

The phonetic values of the signs are, for the most part, reconstructed on the basis of two types of sources: the Egyptian transcriptions and Greek and Latin renderings of Meroitic words, mostly place-names and proper names, as well as the Meroitic transcriptions of Egyptian words, mostly loanwords, in addition to some rare Greek and Latin words.

For example, the name of the king Teqorideamani is written *Teqorideamani* in Meroitic and transcribed *Tqrrmn* in Egyptian Demotic (Philae 416). The /d/ in intervocalic position in Meroitic may have had a retroflex character (see Rowan 2006:61–69) and resembles acoustically an /r/ for the speakers of a language such as Egyptian that does not have that type of consonant. This confusion is absent for the Meroites, who never confuse *ḏ* and *ṛ* in their transcriptions. There is, therefore, an opposition of /d/ and /r/ of which the first is spoken as [d], and the other as [r]. Conversely, the name of Caesar appears in Meroitic as *Kisri*, which would be rendered /kaisari/. The “general (strategos)” is *pelmos* and becomes /pəlamusa/ or /bəlamusa/, in Late Egyptian *p-lmšʿ*. These two transcriptions show that the Meroites did not make a distinction between [s] in Caesar, transmitted no doubt via Greek, and the [ʃ] of Late Egyptian. They had only one phoneme /s/ in free variation with [ʃ]. These hypotheses are, of course, confirmed by other similar transcription examples.

On the basis of many such examples, a phonology of Meroitic consonants can be proposed (see Table 1.2). Nevertheless, some elements remain tentative and many points need clarification. Among others, the existence of the phoneme /p/, proposed by earlier scholars, is doubtful because of its absence in proto-Meroitic texts. The frequent permutations with /b/ in the texts and its occurrence mainly in word-initial position make it suspect. It may have been borrowed from Egyptian, where the Egyptian article *p3* before nouns may have influenced its preference for initial positions.

The certainties about the vocalic system are less spectacular. The absence of a sign for /o/ is most surprising. The phonemes are limited to /u/, /ə/, /a/, /e/, and /i/. The central vowel /ə/ was perhaps not originally there. In the middle of the first century AD, an important phonetic change took place. In many cases the /a/ became centralized and often mute when it was in initial or final position.

Table 1.2: The Meroitic consonant system

	Labials	Dentals	Palatals	Velars	Labialized velars
voiced stops	/b/ [b]	/d/ [d] ~ [ɗ]			
voiceless stops	/p/ [p] (?) (< Egypt. ?)	/t/ [t]		/k/ [k]	/q/ [kʷ]
fricatives		/s/ [ɕ]		/x/ [χ]	/h/ [χʷ]
approximants		/l/ [l]	/y/ [j] (?)		
trills		/r/ [r]			
nasals	/m/ [m]	/n/ [n]			

It is likely that there were two diphthongs, probably /*au*/ and /*ai*/, of which only the second part was written. Long vowels were transcribed in Meroitic with the use of *y* and *w*; hence, *eyi* is a group that is read as /*i*:/; *owo* or *oyo* then makes /*u*:/.

More than eleven hundred Meroitic texts have been uncovered up until today, and each year new discoveries appear from archaeological sites. They are classified with a number in the *Répertoire d'Épigraphie Méroïtique*, or REM (Leclant et al. 2000). The writing surfaces are of different kinds, mostly stone, but also ceramics (ostraca), papyrus, wood, skin, et cetera. The following paragraphs describe the different types of text, each with its own characteristics, as well as the present understanding of their composition and meaning.

E. FUNERARY INSCRIPTIONS OR EPITAPHS

These constitute more than half of the recovered texts and generally follow a stereotypical scheme that has been well documented and analyzed by Griffith (1911a).

1. Invocation

In the vast majority of the funerary inscriptions, the invocation, addressed to the gods, is at the beginning of the text using a vocative-marker *-i*: *Wos-i*: “O Isis,” (*A*)*sorey-i*: “O Osiris.” In a few cases, this invocation is absent (3 percent of the cases in the texts from Karanog, Shablul, and Faras) or placed after the name of the deceased (REM 0331, 0525). This proves its independent syntax in relation to the rest of the text; therefore, Griffith identified this group of words as a vocative. The invocation is often repeated elsewhere in the funerary text, particularly at the end.

Isis is the more important of the two tutelary divinities of the deceased. She is nearly always named first. (There are two counterexamples in Shablul, at the beginning of REM 0381 and at the end of REM 0387, and one at Ballana, REM 1202.) She also occurs alone, particularly if the invocation is repeated (REM 0230, 0272, 1132). There is a surprising case on the princely stele of Tedeqene (Meroe, REM 0832), where the invocation of Osiris is written in a column of hieroglyphs underneath a scene depicting the deity, while the invocation of Isis appears in cursive writing in a less significant area of the stele. Sometimes the names of Isis and Osiris are considered as one, followed by a single vocative suffix, for instance, *Wos : Asoreyi*, or in a different variation, *Woso : Soreyi*. This grammatical fusion of the two divinities is attested for nine funerary texts from different periods and of different origins.

In about thirty texts the invocation is more developed. The names of the deities are followed by epithets. Griffith, who noted this particularity on the stele of Karanog REM 0276 (Griffith 1911a:33–34), called this “extended invocation.” Heyler (1964) introduced the term “invocation solennelle” in French. It is a tradition in particular necropolises since it is found in many instances in some but is absent in others. A large proportion of the funerary texts in Arminna have these extended invocations, but they appear unknown for Nag Gamus, a place quite nearby. The most frequent occurrences are found in Gebel Adda and Sedeinga, where only a few ancient epitaphs are without these extended versions.

In the extended invocations, the god’s name is found on its own, followed by an epithet of some kind, the determinant *-l*, and the vocative suffix *-i*. The epithet is mostly *wetneyineqe-* for Isis. For Osiris, the original form of the epithet is assumed to be **wetrr-*, which may explain why the determinant *-l* has disappeared in the written text. It would have been assimilated in the final part of the epithet *-re*, presented as an additional consonant /r/. These two epithets have many variations but are generally written as follows:

Wos wetneyineqe-l-i : “O Isis, the *wetneyineqe*”

Sori wetrr-i < *Sori *wetrr-l-i* : “O Osiris, the **wetrr*”

It is not yet possible to present a translation, not even hypothetically, of these two epithets. Previous attempts (cf. Priese 1977:45–56) have hardly been conclusive.

Some names of other deities have appeared in invocations without a clear association with Isis and Osiris. Such is the case with REM 0430, an offering table from Meroe, where Isis is followed by the unique word *Msmni*,

which could be the Meroitic word for the sun god Amun-Ra. In REM 0268 and 0381 the final invocation is written *Ptroti*, which can be understood as *p-trose-l-i*. (See the later discussion of Griffith's law.) Apparently, this is a noun because of the determinant *-l*, and undoubtedly an epithet of Isis. In addition, it may be associated with three graffiti inscriptions in the "Meroitic chamber" of Philae (REM 0101–0103).

Even more mysterious is the invocation, found in a dozen epitaphs of Lower Nubia, to a divinity called *mk-lh-l*, or with vocative-marker *mk-lh-l-i*, meaning "O great god" or "O great goddess." The expression commonly has an extended invocation: *mk-lh : qetrr-i* (REM 0129), *mk-lh : wetrr-i* (REM 0504, 1062, 1067), *mk-lh : wetneyine-l-i* (REM 1030). Meroiticists have had numerous debates concerning the identity of this divinity. In REM 0129, 0504, 1062, and 1067 ostensibly it indicates Osiris. In REM 1030, it indicates Isis since there is no other invocation, and the epithet *wetneyine(qe)-l-i*, which commonly accompanies the name of Isis in the extended invocation (although two counterexamples are found in REM 0129 and 0437), is included. In any event, it is not yet possible to link *mk-lh* to one specific deity only, and the use of the phrase may be equivalent to the Egyptian *ntr* '3 "great god" or "Lord."

2. Nomination

The most important part of the epitaph is the evidence provided by the nomination of the deceased. This generally follows the invocation. In contrast to Griffith (1911a:35–41) and Hintze (1959:12, 1979:17) but following Hofmann (1981a:51), a distinction is made here between the "nomination" itself, where the name of the deceased is mentioned (indicated by the letter A, after Griffith), and the filiation, which provides the names of the parents (indicated by B and C).

It is unlikely that there are epitaphs without a nomination. In those cases where a nomination is absent it is clearly an error. Hofmann (1981a:51) cites offering tables from Meroe (REM 0427, 0428, 0434, 0441), where the name of the deceased is not present at the beginning of the epitaph but given at the end of the text. However, there are rare "epitaphs" that apparently present no name of the deceased. This appears to be the case for REM 0313 and 0385, but they are simple blocks of stone and it is not clear that they had the same status as the true funerary Meroitic monuments.

The nomination is oftentimes made by means of a phrase that has a pronoun and/or a copula. However, there are some inscriptions that mention the name of the deceased without additional morphemes that

integrate it into a true phrase. They may be linked to phrases that follow. In REM 0131, two names of two deceased people with the same father are cited without other morphemes, although they are followed by the word *kelkeni*, meaning “also” or “as well as.” In REM 0228, there are three brothers who are named in the same way.

In all other cases, that is, in the present source material available on funerary inscriptions, the name of the deceased is followed by a predicate. Most of the time this is *-qo* or *-qowi* (variations: *-qe*, *-qewi*), probably a demonstrative pronoun accompanied by a copula. Although it is not possible to say this with complete certainty, it appears that *-qo* consists of a pronoun *-qo/-qe* and a copula *-o*. The particle *-wi* should be a simple “emphatic” marker. The other predicate, much less frequent (15 percent of the inscriptions), is *-lowi*, rarely *-lo*. In this variant, the copula is the same. It is the only predicate that appears in filiations and descriptions.

Finally, in 10 percent of the epitaphs, the phrase (noun and predicate) is preceded by another *qo*, which is not a suffix and, apparently, independent. It is almost always graphically separated from the name of the deceased by a separator sign, while the predicate *-qo* most times immediately follows the name without a separation mark. It is, without a doubt, a construction for emphasis where the same pronoun is now put up front for a third time: *qo : A-qo(wi) : “this one, this is A.”* There is only one example with emphasis that has two names with the same father. In REM 1063 it reads: *qo : A₁-qowi : qo : A₂-qowi*.

The name of the deceased is sometimes preceded by an extension, clearly a known title (REM 0256, 0291, 0502, 0538, 0544), perhaps a second name or simply a qualification that is as yet incomprehensible (REM 0201 [?], 0292, 0305, 0326, 1241). It is not the usual way of indicating the title of a deceased, which is commonly the object of a specific phrase as part of the description. (See later discussion.) A similar use of an affix is allowed to commemorate a second person in the same epitaph: *mte : qese-l keni* “also his child” in REM 0258; *yetmde qese* “his *yetmde*,” meaning his nephew or niece, in REM 0215.

A rare but interesting construction consists of a short phrase preceding the name, detached from the nomination itself as shown by the separator that is present in all the known examples. One finds *kdi-qo* : (REM 0087, 0261, 1084) and *s-qo* : (REM 1059, 1073, 1080). The demonstrative *qo* is here an adjective, and the phrases can be translated as “this woman” or “this gentleman” (a tentative translation, since the word for “man” is different and not attested here).

3. Filiation

Most of the time, the filiation of the deceased follows immediately after the nomination. There are a few examples where it appears after the invocation, such as in four texts from Meroe and in another example from Karanog REM 0323, but these cases are very rare. It is more common (6 percent of the cases in Karanog) that it is placed after the description of the individual or its relatives. It could also be absent in epitaphs of a certain length. This is not unusual, and, in about 20 percent of the texts from Karanog and Shablul, it appears to be the case. (See Griffith 1911a:36 for a partial list.) In all these latter cases, the epitaphs are on a stele of which the corresponding offering table has not been uncovered. One case suggests that the filiation was present on the lost monument. Thus the stele of Meroe REM 0832 does not mention the names of the parents of the deceased, but they appear on the corresponding offering table REM 0833.

The name of the mother is commonly given first in the filiations. This detail, which alludes to the prominence of Isis over Osiris in the invocations, is often interpreted as a proof of the elevated stature of women in Meroitic civilization. Griffith already noted that this order was inverted in the Demotic inscriptions and mentioned the genealogical importance of women to the Meroites (Griffith 1911a:36). It is, however, not rare to find the father's name first. In 17 percent of the epitaphs this is the case, but the proportion varies for particular areas and centuries. Apparently, in Lower Nubia and in a late age this phenomenon is more striking. Hintze attributed this to a stronger Egyptian influence at the border. In six texts where the filiations have been preserved in Arminna, five mentioned the father first. But the order is inverted and more frequent in Karanog, still closer to ancient Egypt.

The name of the mother is sometimes found on its own (5 percent of the epitaphs). This is even less common for the father (1 percent). It is not unusual that only his title is indicated (see Trigger & Heyler 1970:32, note h80), such as in REM 0261, 0303, 0308, 0323, 0534, 1019, 1079, 1080. These omissions need to be put in perspective. Here also, the filiations may have been completed on a different funerary monument of the deceased.

It is common that the name of the father is preceded by his title. The name of the mother seems never to be accompanied by such an apposition.

The interpretation of the syntax of the filiation continues to be a matter of debate among Meroiticists. Only a general structure is presented here without going into this debate in detail. The dominant formula, where,

following the conventions of Griffith, B represents the name of the mother and C the name of the father, is as follows:

B *te-dxe-lo(wi)* [or *t-dxe-lo(wi)*] C *t-erike-lo(wi)*

The prefix *te-* has been subject to strong variations over time. The meaning of the first part is “it is the child of B,” alternatively “B gave birth to him/her,” while the second part means “it is fathered by C” or “C begot him/her.” The semantic subject is the name of the person A cited in the nomination. Contrary to what Meinhof and Zyhlarz thought, the terms *t(e)dxe* and *terike* do not represent the “mother” and the “father” (Hintze 1979:58), but the child. The best proof is the use of a predicate plural *-leb-kwi* when two (or even three) siblings are commemorated in one epitaph:

A₁-*qowi* : A₂-*qowi* : B : *t(e)dxe-leb-kwi* : C : *terike-leb-kwi* :

A₁ this is; A₂ this is; (of) B **the children these are**; (of) C **the begotten these are**

= this is A₁, this is A₂ ; B gave birth to them, C begot them.

One encounters quite often a complex wording that is not entirely clear but where the term that expresses the filiation is repeated once, twice, or even three times. An elaborate example is attested in REM 0296/3–9:

Nṯīlī : *tedxel* : *tedxeli yedxeli tedxelowi* : Swē.li : *terikel* : *yerik[e]lowi* :

A number of hypotheses have tried to explain this curious repetition. None of them is quite satisfactory since the sociological implications are not plausible or the syntactic coherence is lacking. (See Griffith 1911a:37; Hintze 1955:366 and note 38, 1959:13–16; Hofmann 1991:201.)

4. Description

The “description,” as it was named by Griffith, places the deceased in the context of family and society. It mentions possible titles as well as the parents and other apparently prestigious people, of whom the names and responsibilities are given. It is undoubtedly the most accessible and most interesting part of the epitaph, and it is not surprising that it has been the subject of many studies, syntactic, lexicographic, and sociological. The two main publications by Hintze, *Die Struktur der “Deskriptionssätze” in den meroitischen Totentexten* (Hintze 1963) and *Beiträge zur meroitischen Grammatik* (Hintze 1979), are completely or partially devoted to the study of descriptions. The same can be said for the principal study conducted by Hofmann, *Material für eine meroitische Grammatik* (Hofmann

1981a). Several sociological analyses have been based entirely on these descriptions, in particular using the epitaphs from Karanog, for instance: Hofmann (1977), “Zur Sozialstruktur einer spätmeroitischen Stadt in Unternubien”; Török (1977), “Some Comments on the Social Position and Hierarchy of the Priests on Karanog Inscriptions”; and Millet (1981), “Social and Political Organisation in Meroe.” On the philological level, the descriptions remain our principal lexicographic source for titles, names of gods (showing the divinities that were served by priests), place-names (corresponding to places where the mentioned practices took place), and kinship terms.

However, they are only attested in a relatively limited geographical and temporal space. The funerary monuments of Meroe do not have them, and there are no known attestations of these descriptions upstream from the third cataract. Also, in Sedeinga, where the second- and third-century epitaphs are exceptionally rich with descriptive phrases, the one surviving complete text on the offering table REM 1092 does not use these descriptions. Among all the Meroitic epitaphs, the oldest one that uses them appears to be the offering table from Faras (REM 0521). Partly on the basis of paleography, this text can be dated to the beginning of the first century AD, but the description of parental relations that usually follows is still absent.

It is the same in Lower Nubia for a more recent time where all the epitaphs do not show the description. In a statistical study on the frequency of these phrases, Hintze (1976) shows that, of a total of 247 texts, 86, or about a third of them, lack the description. In Shablul, it becomes 55 percent, in Faras 57 percent. Trigger and Heyler (1970:50) attribute the high numbers in Shablul and Faras to the relative unimportance of the cemetery and the people who were buried there. Hintze (1976:27–27) prefers to speak of local variation that may be related to other particularities of certain necropolises, such as the existence of epitaphs on lintels in Sedeinga or the preference for stelae in Arminna. He also recognizes that social status may play a role where the number of descriptive phrases is concerned, particularly for the most verbose monumental texts that correspond with powerful people. It is possible to cite twenty-six descriptive phrases on the stele of what is often translated as “viceroy” Abratoye that was found in Tomas (REM 1333), nineteen of the “viceroy” Xawitarora in Karanog (REM 0247), and eighteen on the lintel of Natamakhora in Sedeinga (REM 1091).

In terms of syntax, the descriptions consist of one or, more often, several noun phrases, each ending with a predicate marker *-o(wi)* “it is” or “it was.” The semantic subject is the deceased who is mentioned in the nomination.

Two categories of descriptive phrases can be distinguished. The first consists simply of a predicate marker (possibly accompanied by epithets and various additions) and is called a description of the individual. The other, a description of relatives, indicates a social or family line of the deceased with names or titles or both that are given to one or, often, several important people. This distinction is mainly made to take into account their different syntactic structures.

5. Description of Relatives

The description of relatives places the deceased in his or her family environment, and perhaps within a clan or social group, as indicated by the type of relations that are mentioned with one or more named people, whom we may refer to here as “personal references.” For the women, who rarely have titles, there is most often a unique form of description.

Similarly, the description of the individual usually consists of a phrase without a verb, composed of a syntactic nominal predicate with *-lo(wi)*, or for more people *-lebkwi*, since most of the deceased who are associated with others in the same text can be characterized by an identical relationship with the personal reference. But contrary to the description of the individual discussed earlier, the description of the relatives has a governing noun (expressing the particular relation) and a noun phrase that acts as a genitive to the preceding personal reference. The general translation is therefore:

X y-lo(wi) : “it is the y of X”

or **X y-lebkwi** : “they are the y of X”

X represents the personal reference and y the noun indicating the relation. The structure resembles that in the filiation, as is logical since the latter also shows a relation. Just as in the description of the individual, the semantic subject is still the deceased introduced in the nomination.

The composition of the description of relatives is generally more complex and more varied than the description of the individual. Two elements are, in fact, added: a choice between a determinant or a personal name that specifies the personal reference and a noun that indicates the relationship. Moreover, it is possible to introduce multiple personal references that are governed by the same syntax.

Finally, there exist three alternative constructions that do not follow the general outline: the personal name placed before the title (construction 2), the absence of a determinant and personal name (construction 3), and the topicalization of the personal reference (construction 2|3).

The order of the elements that may intervene within a construction, mostly found in the description of relatives, is the following:

[± governed noun ± apposition or epithet ± indirect genitive ± locative + personal name or determinant] + governing noun (relation of) + predicate

Here also, as in the description of the individual, the complete group of these elements never occurs all together. The heaviest constructions have six or seven elements at the most, but constructions with five elements are, on the other hand, not that rare.

6. Formulas of *mlo-l-o*

In a certain number of funerary texts there appears an independent clause containing the predicate *mlo-l-owi* or *mlo-l-o*. In the majority of cases this formula is not expanded, but in five texts (REM 0327/15–17, 0521/24–25, 1020/11–13, 1067/19–21, 1116/4–5), it is repeated and preceded each time with a different nominal syntax. Griffith (1911a:41) considered it to be a conclusion to an epitaph, and it is correct that in the majority of the texts of Karanog it is found in final position, after the benedictions. But in the entire corpus it is more often found prior to the benedictions (43 percent) than after (36 percent), while in the remaining 21 percent the benedictions are absent or lost.

It is difficult to explain why only certain texts have this sequence and not another. They appear sporadically in only 7 percent of the epitaphs without any geographic, chronological, or sociological connection. Apart from Karanog, they are also found in Gebel Adda, Faras, and Sedeinga. Their absence farther south is explained by their limited number and the brief character of the southern inscriptions. The sequence is attested, like the descriptions, in the texts that date to the first up to the fourth century. They concern both men and women, high-ranking dignitaries and simple local officials.

An approximate translation of this clause would be “he was good” / “she was good,” or if the adjective *mlo* is made into a noun “he was a good (man)” / “she was a good (woman).” Since in some occurrences, the phrase includes a dative “to the king” or “to the god,” it might be best translated as “he was a man of merit” or “she was a woman of merit” (to the king, god, etc.).

7. Benedictions

The epitaph almost always ends with a series of clauses that Griffith has called “benedictions” and that he had identified from Karanog as an

enumeration of offerings promised to the deceased, in particular those of bread and water (Griffith 1911a:42–53). The thousand-year-old funerary texts of the Egyptians provide additional verification of this point. This part of the epitaph corresponds to the main function of the offering table in the Meroitic funerary ritual. It is also rarely absent from the complete texts that have been preserved, and, in the majority of cases, its absence can be explained. A few cursory inscriptions have been reduced to a strict minimum, often a simple nomination, and therefore do not contain a benediction, such as REM 0235, 0280, 0306, 0385, 0516, 1126. But about thirty others, which are equally restricted, can sometimes present an elaborate version. For a few deceased there are two types of funerary monuments: the offering tables REM 0219 and 0274, where the benedictions are absent, correspond with the steles REM 0289 and 0273, where they are present. Similarly, the ones that were not on the stele REM 0518 appeared on the offering table REM 0530 with which it corresponds. There is no example of multiple funerary monuments for the same person that does not show any benedictions. For the celebrated Natamakhora of Sedeinga, there were four texts: an offering table (REM 1144), a stele (REM 1090), an engraved lintel (REM 1091), and a doorstep inscription (REM 1116). Whereas the stele and the doorstep did not have benedictions, they appear on the offering table and the lintel that complement them. It is therefore possible that the absent benedictions in certain epitaphs were featured on another funerary monument dedicated to the same individual.

a. Formulas A to X

Griffith has shown, despite extreme variation of formulations, that the benedictions can be reduced to a dozen types of clauses classified by him from A to L and can relate to the part that follows the principal noun. They probably indicate a particular genre of offers bestowed on the deceased. One “formula X” is added to this list by Inge Hofmann in order to include a passage from a particular archaic stele of Tedeqene (REM 0832; cf. Hofmann 1981a:198–200).

The most current clauses (benedictions A–D, J–L) present the following scheme:

noun + adjective ± determinant ± verbal complex

If the general sense is transparent enough – it consists of granting the deceased an offering represented by the noun, of which the quality is given by the adjective – not all benedictions can be accurately translated. One of the principal difficulties is due to our incomprehension of certain nouns.

But the main problem resides in the interpretation of the verbal complex, which is of an incredible variety both lexically and morphologically, and which contrasts strongly with the simplicity of the unique and unchanging Egyptian equivalent.

Perhaps the verbs have been chosen as a function of the type of offering: “to pour” (water), “to serve” (a meal), et cetera. But this requires another hypothesis, perhaps contestable as well, since the same verbs can be found with different formulas.

It suffices here to present an inventory and a brief analysis of the different benediction formulas, following the classification made by Griffith.

Formula A

This pertains to the offering of water. It appears in practically all the epitaphs that have benedictions, and, most of the time, it is the first to be mentioned. The formula is generally the following:

<i>ato</i>	<i>mhe</i>	prefix + verb <i>-he-</i> + (suffix dative) + suffix
water	plentiful (?)	quenched them with/poured to him/her/them

The noun phrase is often followed by a separator sign “ : ”; on the other hand, it is very rare to find this separator between the noun and its adjective. The verb complex is extremely variable. It often contains a prefix *pso-/psi-/ps-* (with different vocalizations), or *bs-/bsi-*, but one also finds *yi-*. The radical *-he-* is followed by the verbal suffix of the dative, *-x(e)* for singular (“to him” / “to her”) and *-bx(e)* for plural, but the singular never appears since it is assimilated with the /h/ (written *he*) of the lexeme. Then the final suffix is spelled as *-kte*, *-kete*, *-ketese*, *kese*, or, after assimilation of the initial velar, as *-te*, *-tese*, *-se*. In a few rare cases the final suffixes are written *-to* and /a/ (not marked by a particular grapheme). Because of the multiple combinations between these different alternatives and the various possible assimilations, the verbal complex can have a high diversity of forms of which the principal ones, in order of frequency, are the following:

pso-he-k(e)te (pl. *pso-he-bxe-k(e)te*)
pso-h-kete
psi-h-te (pl. *psi-he-bx-te*)
psi-he-kete
pso-h (=pasu-h-a/)

In the early period, the benediction A had the following formula:

<i>ato</i>	<i>mlo</i>	<i>el-h-te</i>
water	good	give to him

This archaic variant is actually known for Meroe (REM 0425, 0427, 0428, 0429, 0441, 0810C, 0833) and for Faras (REM 0543). It concerns the texts of a very ancient time of which the paleography suggests a period possibly preceding the first century BC. Another old formula appeared in the same cemeteries (Faras: REM 0520, Meroe: REM 0449 (?), 0847, 0849) on texts a little more recent, but that undoubtedly date to at least the turn of the first century AD:

ato mlo-l *hol-ke[te]* or *p-tre-kete*
 (a) good water brought (?) / served (?) to him / her

The first verb (at Faras) is the same as that for formula C, while the second (at Meroe) is attested in the royal formula K. The word *ato* “water” has a curious definite article, contrary to the way it is found in the other inscriptions.

Formula B

This formula pertains to bread. It also appears in nearly all the epitaphs that contain benedictions, where it often follows the one about water. It is formulated as follows:

at *mhe* prefix + verb -*xr*- + (dative suffix) + suffix
 bread abundant (?) feed to him / her / them

Often, the separator is found between the nominal clause and the verb complex, and very rarely between the name and the adjective. In the verbal group, the affixes and their variations are the same as for formula A. There is never the expression *pso*- for the prefix as is often found in formula A. The most frequent forms are therefore:

psi-xr-k(e)te (pl. *psi-xr-bhe-k(e)te*)
ps-xr (pl. *psi-xr-b*)
psi-xr-te (pl. *psi-xr-bx-te*)

As previously noted for the benediction A, there exists an archaic formula that is different:

at *mlo* *el-x-te*
 bread good give him

However, it is only found for certain in REM 0427. It is perhaps present in REM 0425, 0428, 0441, but no longer legible. The ancient epitaphs REM 0543, 0833, 0847, 0849 also have *at mlo*, sometimes followed by the determinative *-l*, but they have the following verbal forms, respectively: *ixr[...]*,

holkte (see also formula C), and two times *ptrekete* (see also formula K). Formula B is originally absent from the ancient epitaphs (but not from the archaic ones) REM 0429 and 0520. Finally, the adjective *mlo* “good” replaces also *mhe* “abundant” in REM 0295 and 0376, which are much older.

Formula C

This is the last of the common benedictions, and it usually follows the formulas A and B. It is absent in the particularly archaic or ancient epitaphs, which only know the offerings of water and bread. Evidently, the latter belonged principally to royal funerary benedictions under the variant C' (see later discussion), and Formula C's use has progressively spread since the beginning of the first century AD (in REM 0521, for instance). It is generally formulated as follows:

<i>x-mlo-l</i>	prefix + verb <i>-hol-</i> +	(dative suffix) + suffix
a good meal	bring/serve	to him/her/them

The initial noun phrase, generally isolated from the verb complex by a separator, is attested in different forms, most often *x-mlo-l*, but also with a variation of the determinant: *x-mlo-li* (REM 0238, 0301, 0533, 1077, 1079), *x-mlo-le* (REM 0130, 0230, 0268), or *x-mlo-lw* (REM 0129, 0276, 0383, 1074, 1144). (See also formula C'.) It presents itself in REM 0049 (formula C') with the atypical form *a-mlo-l*, and in REM 0277 it is written *x-blo-l*. It is noted that the verb *-hol-*, appearing regularly in this benediction, is periodically attested in formula B.

In half of the attested verbal complexes, the prefix is absent or nil. In the other cases, it takes the form *p-*, which Hintze (1979:70–71) suggests is an assimilation of *ps-*, a suffix, that is attested a few times preceding the lexeme *-hol-*. Just as elsewhere, the dative verbal suffix (*-bx-*) no longer appears in the plural when the same benediction concerns multiple people. The final suffixes can be *-kte*, *-kete*, *-ketese*, *-kese*, or *-a/* (unwritten as a specific grapheme). Other verbs than *hol* are sporadically used: the most commonly found is *-tx-*, as in formula D, and five times *-dotedi-*, as in formula E. The most common phrases are therefore:

p-hol-k(e)te
hol-k(e)te (pl. *hol-bxe-kete*)
ps-hol-kete
hol
p-hol
ps-tx-kete
psi-dotedi-kete

Formula C'

This benediction differs little from the previous one in its formula. According to Griffith (1911a:51, note 1), it is a curious variant of formula C. Alternatively, one may follow the suggestion of Hintze (1959:35) and distinguish it from the simple formula C with a notation of C'. This benediction C' principally addresses members of the royal family, notably rulers, whose offering tables have been found by Lepsius, later by Reisner, in the pyramids of Meroe. But it can also be found in recently discovered stelae from Sedeinga, which were engraved for local priestesses. The epitaphs, surprisingly simple, do not have any description; the particular formula K, L, and C' (instead of A, B, C) apparently is sufficient for the royal rank of the deceased. It is also true that they were from the South, where the funerary texts are generally brief, in contrast with the verbose epitaphs of Lower Nubia.

Twelve royal or princely offering tables show the benediction C and its variations. In REM 0825 (epitaph of Aritene-yesbokhe), the regular formula C is found for the individuals: *x-mlo-l hol-kete*. The other epitaphs have formulas that can be grouped into four categories:

formula C'₁: *x-mlo-lw* (:) (p)hol-kete (REM 0050, 0059, 0816, 0829)

formula C'₂: *x-mlo-wi* (:) (p)hol-k(e)te (REM 0061, 0815, 0837)

formula C'₃: *x-mlo-witw* (:) (p)hol-kete(se) (REM 0844, 0848, 0850)

formula C'₄: *x-mlo-t* : lot : .. : *ahol-kete* (REM 0060).

These formulas differ from the benediction C only because of the form of the determinants that are used at the end of the nominal clause *x-mlo-*.

Formula D

The formulas D and J are rare, occurring only sporadically in particular epitaphs. They are often grouped with the inscriptions of a certain region and hence may be considered local traditions.

Formula D is very close to C and differs mainly in the use of the adjective *lh* "great" (two times *mhe* "abundant") instead of *mlo* "good." In certain cases, it substitutes formula C after the benedictions A and B (REM 0212, 0237, 0279, 0534, 0537, 1021). In most other cases, it follows A and B. There are only twenty cases attested in total, and, with the exception of two examples in Faras (REM 0534, 0537), all of them are from Karanog or nearby (Shablul, El-Malki, Nag Gamus, Arminna).

Griffith (1911a:51–52) has made two subgroups of clauses: a regular group, D₁, and an irregular one, D₂. The first has the following structure:

x-lh-l(e) prefix + verb *-tx-* + (dative suffix) + suffix

or *-hol-*

or *-pl-*

a large meal give to him/her/them

The first part is never divided by an internal separator and holds the same assimilated noun *x-* as the formulas C and C'. The adjective is *lh* "large/big." The verbal complex has, in twelve of the seventeen cases, the lexeme *-tx-*, while *-hol-*, mostly in formula C, is here reduced to a smaller part (in six occurrences). The verb *pl-*, frequently found in royal inscriptions, is attested here in only two cases. It does not appear elsewhere in the benedictions. The affixes are the same as in the previous formulas. Therefore, the verbal complex most often appears in the following forms:

ye-tx-kete (pl. *ye-tx-bxe-kete*)

p(i)si-tx-kete

hol-kete

The formula D₂ is not clearly defined by Griffith (1911a:52). He gives three instances that differ from D₁ in the strange structure of the nominal clause; thus, REM 0236 presents *xmloili*, REM 0278 *hhll*, and REM 0327 *xmhelli*. The first clause often resembles a variant of formula C, to which the use of the adjective *mlo* "good" is attached. The second has, perhaps, a confusing phonetic value in the script for *x-lh-l*. The third has the adjective *mhe* "abundant" in the place of *lx* "large." All three have a characteristic in common: an incomprehensible doubling of the final determinant. It seems obviously too simple to view this in each case as a mistake of the scribe, but it is noted that this redundant determinant is never attested elsewhere in the Meroitic texts. In any case, the formula D₂ has been enriched with another example since Griffith's work in REM 1077:

x-mhe-li : yi-tx-ktese

where the determinant is not repeated. It is possible to present the following structure for this variant of benediction D:

x-mhe-li prefix + verbs *-tx-* + (dative suffix) + suffix

an abundant ? ? ? give / serve (?) to him/her/them

This structure appears only in REM 0327 and 1077. The formula of REM 0236 can be considered a benediction of type C and the one in REM 0278 an erroneous version of formula D₁.

Formula E

This benediction is known for fifteen examples, mainly from Karanog and its region (Nag Gamus, Arminna). Two occurrences appear on the epitaphs of Faras (REM 0129, 0528). The general formula, which is quite uniform, is as follows:

nse doke-l : dole : hol-k(e)te :
or *(y)i-dotedi-k(e)te*

There is no translation possible, not even a hypothetical one. Perceptibly, the formula contains two initial nominal clauses: *nse doke-l*, sometimes written *nse doke-li* (REM 0218, 0325), and *dole*, sometimes written *doli* (REM 0218, 0325), *dolek* (REM 0272, 1067), or even *dolekw* (REM 0129, 0528). The first clause has a noun *nse*, possibly meaning “sacrifice” (Rilly 2010:135), followed by an adjective with a positive meaning *doke*, known from personal names. This clause ends with the determinant *-l(i)*. The second group has, perhaps, a noun of the form *do-*, followed by the determinant of the form *-le* or *-li*, and sometimes by the postposition for place *-k* or *-kw*, known elsewhere from the place-names with a locative. It is, therefore, not impossible that this second clause is situational. The verbal complex includes either the radical *-hol-* (eight occurrences), particularly frequent in the formulas C and D, or the radical *-dotedi-* (six occurrences), which appears occasionally in formula C. In REM 1085, the verb appears in a part that is, at the present time, missing. It is surprising to observe that the offering tables from Karanog REM 0325 and 1132, though from a late period, present a prefix of the form *i-*, an archaic writing of *yi-*. Perhaps this formula has been copied from an ancient text.

Formula F

This benediction is extremely rare: It is only attested in REM 0137B, 0311, and 0326, three offering tables of similar workmanship. The first was found in Aswan, and the two others originate in Karanog. The three examples are written as follows:

REM 0137B: *sr mx : yi-we-bx-te* (plural)

REM 0311: *sr [m]h psi-l-ke*

REM 0326: *sr : mh psi : wi*

The initial clause consists of a noun *sr*, followed probably by variants of the adjective *mhe* “abundant.” In REM 0445, an ancient, much eroded offering table from Meroe, there appears an incomprehensible context *sr mlo*,

where apparently the same noun is present, followed by the adjective *mlo* “good,” and perhaps the verb *-l-* “to give.” Hofmann (1982b:50–52), in a convincing argument, has proposed to give the noun *sr* a meaning of “meat” or “animal.”

The verbal complex contains the rare verb *-we-* / *-wi-* in REM 0137B and 0326, and perhaps the verb *-l-* “to give” in REM 0311, even though this last one is not attested elsewhere in combination with these particular affixes. The sense of the benediction F is, perhaps, something in the region of “give him / cut him / cut them the meat in abundance.”

Formula G

Nine examples are known that go back to Medik at Faras: REM 0087, 0089, 0137B, 0214, 0311, 0381, 0528, 1020, 1024A. It is noted that two of these epitaphs, REM 0137B and 0311, also have the rare formula F. Benediction G has the following appearance:

at(e)th mlo + determinant + prefix + verb *-tx-* + (dative suffix) + suffix

The initial noun remains obscure, even if it is seen as a derivation of *ato* “water” (Abdalla 1988:6,13). It is followed by the adjective *mlo* “good,” and one time by *mxe*, variant of *mhe* “abundant” in REM 0311. The clause thus formed has received the following diverse determinants: *-l* (REM 0214, 0311, 0528, 1020) and its variants *-li* (? REM 0137B) and *-le* (REM 0089, 0381), but also *-lxe* (REM 1024A) and *-wi* (REM 0087). Both *-lxe* and *-wi* are known from elsewhere.

The verb is in all cases *-tx-*, and attested in both formulas C and D. The prefixes are *p(i)si-* or *y(i)-*, the final suffix is generally *-kete* or *-kese*, but REM 0089 has the suffix *-to*, REM 0137B *-te* (perhaps an assimilation with *-kete*), REM 0311 presents the suffix *-ke*, and REM 0381 the simple vowel /a/ after the dative plural marker *-hxe-*. The verbal complex is most often written as *p(i)si-tx-kete*.

Formula H

Together with Hofmann (1981a:197), one may ask why Griffith decided to create a special category for this benediction. This formula has only one example, and this clearly is a variation of formulas C and D. It is found in Karanog (REM 0299B):

x-mlo-li : x-lh-wi : pisi-kle...-kte

Two nominal clauses follow each other, both constructed around the noun *x-*, “meal.” The first clause is the same as the one found in formula C, with the adjective *mlo* “good,” followed by a determinant. The second appears in the initial group of the D benediction, with adjective *lh* “large,” but it differs with the rare usage of the determinant *-wi*, as far as this interpretation is correct. The verb would be *-kle-*, a surprising and unique word. The little care with which the characters have been written, together with the insufficient clarity with which the copy of the text was made, prevent the verification of this verbal form. But one may ask whether it actually consists of the verb *-pl(e)-*, two times attested in benediction D, a formula closest to the one here.

Formula I

This formula is also a category with one unique occurrence, REM 0374. However, this formula is completely original:

si-wi : temkene : si-wi wi-l : psi-keh-kete

It is impossible to propose any syntactic interpretation of this phrase. The suggested segmentation here, similar to the one suggested by Hofmann (1981a:197), is based on the occurrence of *si-lw* in REM 0045, which indicates the existence of the rare noun *si-*. The verbal complex, with the usual affixes, is, however, a unique word, and no other form of this verb *keh* has been found. But here, contrary to formula H, the text is legible, and, with the exception of only one sign, the transliteration is certain.

Formula J

At the time that Griffith (1911a:52) published his work, formula J was also represented by a unique example in the stele of Shablul (REM 0386). But, contrary to the other two formulas mentioned previously, this benediction has since been found on newly discovered stelae (but not on any offering tables) at Arminna (REM 1063, 1064A and B, 1066A and B), at Qasr Ibrim (REM 1183), and at Gebel Adda (GA 25). The number of occurrences of the formula J has increased from one to eight. They are all from the same region, but particularly from the Arminna necropolis, where seven texts present well-conserved benedictions, five of which contain the formula J. The phrase, which varies little from text to text, is written as follows:

atepoke / yetepoke dot-lxe : p(i)si-tx-kese

There is no translation. The initial element, a noun, is found as *yete-poke* at Arminna, *atep : ke* at Shablul, *atepoke* at Gebel Adda, and *atepoqe* at Qasr Ibrim. A possible loan from the Egyptian word for “offering” has been proposed, but this hypothesis rests on the segmentation *atepo : ke*, only found at Shablul, and, therefore, does not provide an unbiased and definite connection.

The term that follows, *dot*, is probably an adjective with a positive connotation that was found in combination with two titles attested at Sai and Karanog (*dotke* and *dotli*). The clause ends with a particular form of the determinant *-lxe*, which is not without problems. It has actually been suggested (Priebe 1971:282, 1979:120, 132) that this element has a dative postposition *-xe*, which can have a more general value extending to an accusative. It contains a verbal dative referring to the beneficiary, assimilated when it is singular, but visible in the plural in the form *-bx-* (REM 1063 and 1183). However, the stele of Shablul REM 0386 has, according to Griffith (even though this part of the stele is poorly legible), the more classic determinant *-li*, compatible with the function of the object of the nominal clause.

The only verb that is used is *-tx-* (Arminna variant *-tk-*), which appeared earlier in the formulas C, D, and G. The prefix is uniformly *psi-* or *pisi-*, except in REM 0386, where one finds *ye-*. It is interesting to note that the final suffix is almost always *-kese* (assimilated to *-se* in REM 1183), a minor variant of the prefix *-kete*.

Formula K

Just as the formula that follows does, this one consists of a benediction reserved for rulers and their families. (See also formula C' earlier.) It is only attested in Meroe. There are a dozen examples that give the following structure:

athe mhe-lw + prefix + verb *-tre-* [+ dative suffix] + final suffix

The initial clause, without internal separator, is highly regular. It is mainly found in REM 0815 and 0816 with the variation *athe mlo-lw*, where the adjective *mlo* “good” is replaced by *mhe* “abundant.” The initial noun *athe* is not yet understood, even though there have been numerous hypotheses put forward. It may simply be a special kind of bread (see *at* in formula B).

The verbal complex is generally *p-tre-kete*, a form of the verb *-tre-* specific for this benediction (although there are some archaic variants in A and B). The initial prefix may be absent (REM 0059, 0816, 0838). The verbal dative suffix, if it is present, never appears in the singular because it is

assimilated before the final suffix. There is no dative plural, since virtually all the stelae belonging to the rulers commemorate a single person. In REM 0815, the final suffix is absent; in REM 0837, it has the form *-to*, and the expanded form *-ketese* is found in REM 0844.

Formula L

As in the prior one, this benediction is reserved for royal offering tables. With the previous formula, they were studied by Griffith, not as Karanog inscriptions, but as inscriptions of Meroe. Some were from the west of Begrawwiya (REM 0838, 0843, 0848), possibly because of an appropriation of the local princes of these royal formulas (Rilly 2001). This benediction corresponds with a liquid offering, as does benediction A for other individuals. Formula L is absent in the epitaphs of REM 0815 and 0848 and thus does not have the systematic character of benediction K. With great regularity it is presented as follows:

yer (:) *mlo-lw* : (*p*)*twd-kete(se)*

The nominal clause ends with the determinant form *-lw*, as in formula K. The noun *yer* is compared by Hintze with the Demotic and Coptic word for “river.” But this hypothesis is not at all certain: One may wonder why Meroitic would need to have borrowed a term that was already in its original vocabulary and that was not charged with religious meaning in Egyptian (contrary to other borrowings of religious terms in the same period). A translation “milk,” proposed by Hofmann, is more plausible. Patrice Lenoble (1994:274) has shown the importance of the milking ceremony in the royal funerary rites. Moreover, such an interpretation is met with numerous parallels in other Nilo-Saharan languages.

The adjective is, in most cases, *mlo* “good,” but *mhe* “abundant” is also found in REM 0838 and 0843. The only verb attested here is *-twd-*, which is sometimes found in other types of royal texts (REM 0409, 1044). The prefix *p-* is absent in REM 0059, 0816, 0850, but present everywhere else. The dative suffix, if it is present, is always singular (*-xe*) and thus hidden through assimilation in the plural. The final suffix is sometimes *-kete*, sometimes the longer form *-ketese* (REM 0838, 0844).

Formula X

This name is used by Hofmann (1981a:198–200) for a series of atypical benedictions that appear on the monument of a certain *Tedegene*, a stele of an early period (second century BC) discovered in Meroe. The rank of

the deceased is unclear; he seems to be depicted in a dress with a crown as a member of the royal family, but the benedictions of the offering table (REM 0833) are those for nonroyalty. The corresponding stele has three strange formulas with terms that are unlikely to be Meroitic or otherwise intelligible.

b. The Order of the Benedictions

It is not possible to explain the reasons for this or that combination of benedictions completely, but there are some general tendencies in which chronological and local factors play a role.

With regard to the rulers and their family, the combination KLC' is fairly stable over time. The oldest stelae for other individuals mostly use A and B, sometimes just formula A.

During the first century AD, benediction C is added, perhaps through the influence of the royal formula C'. The most common order is ABC, even though multiple variations exist, and this remains so until the end of the Meroitic Kingdom. In the middle of the second century AD, there appear other formulas (D, E, F, G, J), exclusively used between the first and second cataracts, particularly in Karanog, Arminna, and Faras. It becomes common for the benedictions to number four or five, sometimes with repetitions of the same formula (most of all B, C, or D). In the late period (fourth century AD), the benedictions generally return to a simpler form with a predominance of the combinations AB and ABC.

8. ROYAL TEXTS

Royal texts are generally found on stone stelae and may be of considerable length. The longest one (REM 1044) measures 1.60 meters in height and 161 lines of text on the four sides of the stone surface. These inscriptions are the least well understood of the Meroitic texts. They contain narrations and, therefore, complex sentences with a rich vocabulary. They begin with a protocol that gives the royal names and titles, and they continue mostly with what appear to be religious phrases followed by reports of military campaigns. The best known are the great stelae of prince Akinidad and the Candace (= ruling queen) Amanirenas (REM 1003), the stele of Taneyidamani (REM 1044), the "Obelisk" of Meroe or the stele of the Candace Amanishakheto (REM 1041/1361), and the late inscription of Kharamadoye (REM 0094), which is not a stele but a text written on a column of the temple of Kalabsha.

An analysis of five of these stelae (REM 1044, 0092, 1003/4–5, 1039, 1333) provides some likely translations. Despite the complexity of these texts, there are recurring phrases in different texts, including the words *abr* “man” and *kdi* “woman,” two terms whose meanings are well established, as well as other nouns that are less clear, and recurring verbs.

In several phrases on REM 1044 and 1003, as well as on REM 0092 and 1039, the nouns *abr* and *kdi* are each followed by a particular determinant *-se-l(i)* or *-se-wi* and a verbal form, the radical *-ked-* for the first (also REM 1333, but not REM 1039), and *-erk-* or *tkk-* for the second. Griffith (1917b:167) has suggested in his study of the Akinidad stele (REM 1003) that these phrases refer to a description of war, as is shown by the figures of prisoners. They describe the victory of the rulers “slaughtering the men, enslaving the women.” There is material that allows a precise comparison between the purely Egyptian stelae and their Meroitic equivalents. This material consists of the best-known texts from Kush, engraved in Late Egyptian by the latest kings of Napata, who preceded the rulers of Meroe.

On the stele of Nastasen (Berlin no. 2268), a clear parallel text to REM 1044 and 1003 can be found. The words for slaughter and raid in Egyptian correspond to the Meroitic verbs *ked-* and *erk-*. The first is applied to the men (*abr-se-l*), the second to the women (*kdi-se-l*). In REM 1003, the verb *tkk* replaces *erk-* in the clause for women. The verb *erk-* sometimes appears in the longer form *yerk-* in the clause that follows in REM 1003. In REM 1039, the men are included in the same clause ending in *tkk*. Hence the verb *ked-* probably means “to slaughter,” as suggested by Griffith. Various objections to this translation by Hofmann (1981a:297–298) have been refuted elsewhere (Rilly 2010:76–77).

Similarly, the verb *erk-/yerk-* and its synonym *tkk* probably mean “to raid” or “to seize.” Both have a final *-k-* that could correspond to a suffix with a specific value. It is therefore quite likely that the first word derives from the verb *ar-* “to take,” which also appears in its longer form *are-* in the context of seizing women in REM 0092 and 0521. The different initial vowel can be attributed to a prefix as explained later. The second word *tkk* may derive from the verb *tk* “to take,” even though the presence of frequent homonyms in Meroitic may suggest other verbs as well.

In the Napatan texts mentioned, and in almost all other cases, the slaughtering and seizing are attributed to the ruler, and the verbs appear to be presented in the first person singular. This is possibly marked by the prefix *e-*, which appears on REM 1044 before the verb *ked-*, with a more recent variant *ye-* in REM 1003. Similarly, the verbal forms *erk-* (REM 1044) and *yerk-* (REM 1003) can be analyzed as *(y)e- + ar-k-*, with a contraction of the

initial vowel *a-* and the prefix. It is noted that the consonant *r-* cannot be in initial position in Meroitic. (See Rilly 2007:389–390.) The presence of this prefix before *ked-* and *tkk* may have been considered superfluous. In the late text on the stele of Abratoye (REM 1333), the element *ye-* is absent, but it is present in the first occurrence of the verb, *yeked*, in line 6. This suggests that the element *e-/ye-* is optional and is a pronoun that means “I.” There is another element *ye-* that appears in verbal forms but that is probably not the first person singular (Rilly 2007:557, 561–562). This pronoun (y)*e-* “I(?)” is only a hypothesis and not yet in support of the preceding analysis.

The term *ar-* in REM 1003 is associated with *kdi-* “woman” and points out individuals who are dependent on women and, like them, may become part of those taken into servitude. Since it has a masculine suffix in personal names, the translation of “boy” is suggested. Griffith (1911a:36) noted earlier that many names of men end in *-r*. If one applies the conventions of Meroitic writing in which the /a/ is only written in initial position, the final *-r* of personal names has to be rendered as *-/ara/*, and this corresponds exactly with the isolated writing *ar*. It appears quite likely that it is the same word, meaning “boy, male.” The word is similar to the ancient form *ar-* of the verb *are-* “to take,” confirming that Meroitic has many homonyms that probably have been distinguished by different tonal patterns.

The element *-se* appears in *abr-se-l(i)* / *abr-se-wi*, *kdi-se-l(i)*, *ar-se-li* and most probably means “each”; *-se-l* or *-se-wi* replaces the numbers given in the list of seized goods in the same way as in the parallel Egyptian text on the Nastasen stele. The form *-li* is a variant of the simple determinant *-l*, and both are singular so that the translation “each,” which is singular in English, is preferable to “all.” The alternative *-wi* is known elsewhere as a rare variant of *-l* in funerary benedictions, in particular in formula C'. The translation of “each” for *-se* appears solid since it fits with all stelae that were compared for this purpose.

The noun (y)*emoqe*, which corresponds with a special category of seized goods on REM 1003, cannot be translated. Comparing the parallel Napatan text suggests that it may be “goods,” “possessions,” “herd,” or “livestock,” but the large number of possibilities and the small number of occurrences do not allow a satisfactory identification.

9. ICONOGRAPHIC TEXTS

These are texts that accompany the representations of deities and the royal family on the walls of temples. The majority of them are written in hieroglyphs, a way of writing that is rarely found for other texts. The principal corpus of these texts is found in the south of the kingdom, in Naga, at the

temples of Ammun and Apedemak, which are better preserved than the other Meroitic sites. These texts, as far as they are understood today, give the names and titles of the royal and divine figures and call for benedictions from the deities.

10. PROSCYNEMES AND GRAFFITI

Proscynemes are inscriptions carved on the walls of temples where pilgrims register their passage and their adoration of the divinity. There are hundreds in Greek and Demotic in the temple of Isis in Philae. Some of them are in Meroitic and can be understood thanks to the parallels with Greek and Egyptian. The formulas are commonly as follows:

tewiseti : X s-o *Wos n-l(w) : ber-wi* : (with variations)

the proscyneme of X it is in the presence of Isis it was written (?)

The meaning is only an approximation: "this proscyneme, which belongs to X, is written (?) in the presence of Isis." Numerous other types of graffiti have been recorded in holy places. One of them, for which we also have parallels in Greek and Demotic, accompanies a representation of a pair of feet, which evidently symbolize a pilgrim who has arrived at this sacred place on foot.

11. COMMEMORATIONS OF FUNERARY OFFERINGS

These inscriptions are discovered infrequently, but they are important for our understanding of the language. Meroiticists considered them to be texts that indicate the construction or renovation of a building, but it was recently demonstrated that they have little to do with this. Instead, they mention and list the offerings (notably the sacrificial offerings) that the family of the deceased has provided during the year that followed the burial. In one case (REM 0076), the offerings to the gods of Gebel Barkal are commemorated.

12. SPELLS

Only very few examples of this kind of official magic exist. They are written in the Egyptian tradition, which involves the use of vases with the names of people and enemy leaders that were ritually destroyed, or statues of enemies shown as prisoners. The Meroitic equivalents are written in stone or carved in bronze plaques with enemy figures and legends of a certain people. The most interesting of these figures is from Meroe (REM 1180) and

carries the inscription *qo : qore nobo-l-o* “this one, it is the Nubian (Noba) king.” With the help of paleography, it was dated to the first century AD and provides important historical evidence regarding ancient Sudan.

13. ORACULAR AMULETIC DECREES

These texts are of variable length and are found on ostraca, papyrus, and skin. Millet (1982), who first studied them, considered these examples to be letters. It was recently shown that the texts mostly concern protection (Rilly 2000a), realized by decrees provided by certain sanctuaries such as the one of Amun at Qasr Ibrim, where there is an oracle of Amun that may give out “divine decrees.” These inscriptions on strips of papyrus are perfectly copied on ostraca and kept in private houses or reproduced on skins and carried as talismans. This tradition, which had existed in Egypt during the Twenty-first Dynasty (1069–945 BC), apparently continued in the Meroitic region. The texts name the addressee, followed by a benediction of one or more deities, most often Isis and Amun of Primis. Then various texts may list all the misery that the carrier of the talisman will escape.

14. INSCRIPTIONS OF DEDICATIONS

The texts contain a name, a title, or both, followed by the suffixed element *-s-o* “it belongs to.” The inscription is marked on an object in order to dedicate it as a funerary object.

15. OSTRACA WITH NUMBERS

These very short texts, written with paint or pigment on ceramic pieces, are probably administrative or commercial counters. They are the primary source of numerical signs and have ideographic characters that symbolize measures or food products. There are about sixty examples, most of them collected from Faras by Griffith (REM 0551–0590).

II Meroitic Writing

A. THE SYLLABIC NATURE OF THE SCRIPT

It has taken more than a century for the writing system of Meroitic to become fully understood. Lepsius (1852:218) concluded, on the basis of the number of signs, that the script was an alphabet. Griffith (1909:47) reached the same conclusion, stating: “it is impossible that so few characters should make a syllabary. We are here undoubtedly dealing with an alphabet.” With the publication of Karanog, there was an evolution of this initial interpretation. Although Griffith (1911a:7) continued to speak of an alphabet, he admitted that the script did not indicate all the vowels and that it was a partial system.

The same idea of a “defective script” was used and amplified by Griffith’s successors (Schuchardt 1913:166–167, Zyhlarz 1930:415, 1956:23–24). Griffith thought that the vowel /a/ was in principle only marked in initial position. Hintze (1974) presented an improved transliteration at a congress in Khartoum in 1970 that revolutionized the understanding of the writing system. It was not a defective alphabet with an approximate notation of the vowels but a simplified syllabary, today known as an alphasyllabary, or abugida. This insight has been crucial and, for a change, was not instigated by Griffith in any way.

The proof of this interpretation has also been developed by Hintze. First of all, there is a text on the small stele of King Taneyidamani (REM 0405A), a very early text, presented in a strange way. The inscription is made in horizontal lines, but the signs that indicate the vowels are smaller and in subscript, except for the vowels that form a syllable by themselves. For instance, *wteḷi etohto* (lines 2 to 4) is written *wteḷ_i etohto*. This system of subscript is unique and has not been attested elsewhere but illustrates the syllabic nature of the script. Similarly, it appears that in the Meroitic texts, in all periods, the line breaks never separate a consonant and its vocalic

complement. These characteristics are not found with alphabets and clearly indicate the syllabic nature of the Meroitic signs.

The absence of the vowel /a/ was suspect in Griffith's system. With Hintze's theory, this absence is easily explained. It is a default vowel or an inherent vowel of each syllable. The syllable has a vocalic value /a/ unless another vowel value is indicated by one of the vowel signs. This simplified syllabic system is common in many other writing systems, both ancient and modern (de Voogt 2010). It appears both an adequate and an efficient system for writing the Meroitic language because of its predominantly CV syllable structure.

Although this system is a great improvement in terms of simplicity and efficiency compared to ancient Egyptian, it does not indicate vowel length and diphthongs. Similarly, it is impossible to know whether Meroitic, like many other African languages, and, particularly, like Nubian, had distinctive tones. But even the later Old Nubian script does not indicate this characteristic.

B. CONVENTIONS

1. Vowels in Initial Position

The Meroitic script has, more than other (alpha)syllabic systems, struggled with the representation of the initial vowel. The speakers adopted a complicated and changing system that is not without ambiguity. At first (up until the middle of the first century AD), they could use the vocalic signs *e* and *i* independently, as in an alphabet, in order to write the initial vowel [i] or [e]. For the other vowels, [a], [ə], [u], the initial vowel *a* was used. But at the end of the first century, there were two important modifications: The first is phonetic with a weakening of certain vowels and a mute schwa. The second is graphic and bans the alphabetic use of the vocalic signs and corresponds with a generalization of the syllabic system. In this system the vocalic sign does not have a meaning if it is used on its own, and it has become a true vocalic modifier only. In this double evolution, the writing of the initial vowels becomes complicated, consisting of three different procedures. On the one hand, the sign *a* is transcribed as either [a], [ə], or [u]. On the other hand, a second method places before the vocalic signs *e* and *i* a purely graphic *y* that serves as a neutral consonantal base of the vowel, a method also found in other alphasyllabic systems. It would have been possible to use the *a* as a base for each vowel modifier, but that is not the case. The initial *a* is already composed of two graphic elements, of which the second is identical to the sign *e*, and this may have prompted the development indicated. As if this

Table 2.1: The evolution of the initial vowels in written form and phonetically

Until the first century AD			From the first century AD onward		
Early graph	Early value	Early example	Recent equivalent	Recent value	Recent graph
<i>a</i>	[a]	<i>ant</i> “priest”	<i>ant, at, ate</i>	[a]	<i>a</i>
<i>a</i>	[a] or [ə]	<i>akroro</i> “prince (?)”	<i>kroro</i>	silent	absent
<i>a</i>	[a] or [ə]	<i>abr</i> “man”	<i>br</i>	[a] or [ə]	nonmarked
<i>a</i>	[a]	<i>ato</i> “water”	<i>ato, yeto</i>	[ə]	<i>a, ye</i>
<i>a</i>	[u]	<i>apote</i> “envoy”	<i>apote</i>	[u]	<i>a</i>
<i>a</i>	[u]	<i>Asori</i> “Osiris”	<i>Sori</i>	silent (?)	absent
<i>e</i>	[e] or [ə]	<i>erike</i> “to beget”	<i>yerike</i>	[e] or [ə]	<i>ye</i>
<i>e</i>	[e]	<i>erewke</i> “east”	<i>yirewke / yrewke</i>	[i]	<i>ye (?) , yi, y</i>
<i>i</i>	[i]	<i>ireqw</i> “toward the south” –	<i>yireqw</i> <i>yirohe / arohe</i> “safeguard(?)”	[i]	<i>yi, a</i>
<i>wo</i> or <i>a</i>	[u:]	<i>Wos, As</i> “Isis”	<i>Wos</i>	[u:]	<i>wo</i>

was not complicated enough, a drastic method consisted of just dropping the initial vowel [ə] and perhaps also initial [a] and [u] in writing, since a certain number of words seem to have lost, through weakening of the vowels in the course of the first century, their initial vowel. But the persistence of etymological writing has created the situation that the initial *a*- is written or omitted almost randomly in the later period.

It is not impossible that parallel to the system of inserting a *y*- graphically, the sequence *wo*- served also to write a long initial [u] in the first century BC. It seems to be the case for *Wos* “Isis,” which was probably read [u:ɕa]. The rare and archaic variant *As* (REM 0049), corresponding with [uɕa], explains itself more easily this way.

Table 2.1 summarizes the use of the initial vowel in Meroitic writing as far as the overlap of systems, the limited corpus, and the difficult interpretation allow.

2. Vowel Series and the Notation of Long Vowels

Parallel to the replacement of the initial vowels *e-* and *i-* by the syllables *ye-* and *yi-*, the sequence of vowels that are found within words disappears in the course of the first century AD. As a result, the ancient invocation *Asorei* “O Osiris” (REM 0435) is almost everywhere replaced by *Asoreyi* and afterward by *Soreyi*. Griffith (1916b:117–118) explains this evolution by a systemization of the consonant-vowel sequence: “that vowel should follow vowel was a thing not endurable in Meroitic; the difficulty was got over by the insertion of *y*.” This process is found in the majority of the cases but is not always applied in the recent era (Griffith 1911a:13, note 5), so that there is *Sorei* in REM 0309, 0316, 0317, 0325, 0380, 0383, 1076, 1132, and these are not early texts. The inscription on REM 0440, which can be dated to the second century AD, presents a unique word *Sori* as final invocation, but the text begins with the usual *Soreyi*.

The question is whether the *-y-* has only a graphic or also a phonetic value, and many suggestions have been made in the literature (for an overview, see Rilly 2007:293). The sequence *Asori* + *-i*, in which *Asori* is the isolated form of the name Osiris followed by the vocative suffix, is given a graphic representation of *Asorei* or *Asoreyi* but not **Asorii*, which does not exist, or *Asoriyi*, which exists but is in the minority. If the different variants of the invocation of Osiris are observed, there is a certain phonetic unity despite the diverse graphic representations:

(A)soreyi: *passim*

(A)sorei: REM 0309, 0316, 0317, 0325, 0380, 0383, 0435, 1076, 1132

(A)soriyi: REM 0214, 0217, 0218, 0223, 0236, 0294, 0308, 0311, 0294, 1208

Only a phonetic realization [(u)çuri:] with long *i* seems to go along with all these forms. The long /i/ is a contraction of the final vowel of *Asori* “Osiris” with the vocative suffix *-i*. In (A)sorei, the final vowel is indicated as a distinct syllable and separated from the preceding *r* by the sign *e* with no sound value. The Meroites have used the sign *-rei* because the *i* is long and this length distinguishes the word from (A)sori “Osiris” without a vocative suffix. The insertion of *-y-* provides a consonant to support this isolated vowel, identical to what happened to the initial vowels. It is possible that the process with initial vowels influenced the vowel sequence process, or vice versa.

(A)soriyi can be interpreted in two ways: Either it is etymologically marking the doubling of the final vowel, or it is a somewhat redundant way to transcribe vowel length. It is undoubtedly not a sequence of vowels in

the earlier case but a way of writing a long vowel. However, the function of the *-y-* as a graphic support of an isolated vowel, as with the initial vowels, is confirmed in the form (A)*soreyi* and probably also in the variant (A)*soriyi*.

Another case concerns a derivational suffix, added to nouns or adjectives, that is written as *-ose* or *-yose*. The meaning of this suffix is still obscure. Often it is difficult to uncover the word with which it is formed, but in three cases the etymology is clear: *mheyose* is from *mhe* “abundant (?)”, *qorose* from *qore* “king,” and *mloyose* from *mlo* “good.” In the first case, the presence of *-y-* can be explained by a final vowel in *mhe*. In the case of *qorose*, on the other hand, the *-y-* is not necessary since *qore* is pronounced as [kwur] and ends with a consonant. Finally, for *mloyose*, the interpretation is not of one kind since there are many variations:

mloyose: REM 0241

mlowose: REM 0247

mleyose: REM 0129, 0256, 0504, 1066B, 1108A (?)

mlewose: REM 0551, 0552

The first two forms correspond etymologically to the sequence of two signs *o*: the final *o* of the adjective *mlo* and the initial vowel of the suffix *-ose*. In the first case, the intervocalic *-y-* has the same function as the graphic support sign in the preceding examples. In the second case, a *-w-*, phonologically more accurate, but probably also artificial, has replaced the *-y-*. The writing of *mleyose* and *mlewose* is exactly parallel with the form (A)*soreyi* earlier. It consists in an artificial way of transcribing the long vowel [u:] in a phonetic realization of [malu:ç(ə)], obtained through a contraction of two original sounds [u]. The use of *wo-* for writing [u:] was already explained in the previous section on the name *Wos* “Isis.”

The intervocalic *-y-* in all cases and the *-w-* before *o* are, therefore, as Griffith already supposed, part of a purely orthographic process for providing a consonant that supports an isolated vowel. Their use is part of a generalization of the syllable structure of the writing system. The previous discussion also indicates that Meroitic words rarely show a succession of vowels since they are contracted to long vowels or, as will be shown, diphthongs. The only example where successive vowels are shown distinctively is in *Pyesi* and *Tyesi* (see Rilly 2007:294), which are transcribed Egyptian names. Is it possible to conclude that the graphic sequences *-eyi-*, *-iyi-* show systematically a long *i*, and *-eyo-*, *-ewo-*, *-oyo-*, *-owo-* a long *u*? This would be logical. It is noted that only the first is frequently found in words, while the second is only found in names with a vocative, notably in the decrees on oracle amulets (see Edwards & Fuller 2000:89). The other possible sequences that transcribe a long *u* are rare. It seems that the writing of long

vowels corresponds above all with a necessary morphological clarification, mainly showing the presence of suffixes, such as the vocative or the ones in nominal derivations.

3. Notation of Diphthongs

It is necessary to distinguish a vowel sequence, in which each vowel belongs to a different syllable, and a diphthong, in which the two vocalic elements are part of the same syllable. Even if the first situation appears rare or even nonexistent in Meroitic, there is little to suggest that that is the case for diphthongs. The following examples may show their existence and indicate their notation.

Griffith (1911a:22) states with respect to Karanog: “there is no evidence that two vowel sounds followed each other without a consonant between.” With the absence of a recognizable notation of diphthongs, this viewpoint was followed by others (Hintze 1973a:322, Hofmann 1981a:29), and only Priebe (1977:39 [2.13]) assumed a diphthong /-ai/ in the vocative form *Wosi* “O Isis.”

It is curious that the final /a/ of *Wos* “Isis” (= [u:ɕa]) disappears in the vocative, and the same problem is found with invocations such as *Mnpi* “O Amanap” (REM 0091C) and *Amsi* “O Mash” (ibid.). In spite of the traditional transcription of the names of these gods, it should not be forgotten that they end in an /a/ in Meroitic in their bare form. A phonetic rendering of [u:ɕai], [manapai], and [(ə)maɕai], in which the last two vowels constitute a diphthong, is, therefore, quite likely. In this case, only the second element of the diphthong is written in Meroitic, as was predicted by Hintze (1973a:322). But our limited understanding of the Meroitic morphology does not allow the conclusion that the final /a/ in these names was not simply removed when a vocative suffix /-i/ was added on. This is only a first indication, since there are other facts that may point at the existence of a diphthong in Meroitic.

In certain invocations in the epitaphs, one finds, instead of the traditional *Wosi* : *Asoreyi* “O Isis, O Osiris,” a strange *Woso* : *Soreyi* (REM 0311, 1019, 1020, 1082). Griffith (1911a:33) thought of a mistake in REM 0311, but the discovery of another three occurrences has made this interpretation doubtful. In certain invocations, the complete expression Isis + Osiris is treated as one syntactical unit for which the vocative suffix is only found at the end. So there is *Wos(:)(A)soreyi* “O Isis-Osiris” instead of *Wosi Asoreyi* “O Isis, O Osiris.” It is possible to suggest that the same is true for *Woso* : *Soreyi*, but the succession of [u:ɕa] + [uɕuri:] resulted in a diphthongization [u:ɕauɕuri:], a complex of vowels that is transcribed in Meroitic as

Woso + Soreyi, ignoring, as in the other example earlier, the initial part of the diphthong.

Finally, there is some minor evidence in the transcription in Meroitic of the name *Caesar*, written *Kisri* in REM 1182. If it follows the Greek pronunciation, the word should be [kaiçari]. Here also, only the second segment of the diphthong is written.

The preceding three observations are coherent enough to suggest the existence of diphthongs in Meroitic, at least [au], written *-u*, and [ai], written *-i*. Unfortunately, the partial transcription of the diphthongs prevents any understanding about their frequency. The only three examples that could be reconstructed are at the intersection of lexemes and morphemes, or between two lexemes, and in a foreign name that is known from another language. It appears impossible to know whether *i* inside a word represents a simple vowel [i] or a diphthong [ai].

4. Consonant Clusters and the Elision of Nasals

In Meroitic, the syllabic nature of the script has given each sign the value of an open syllable, without a coda (final consonant) and a double initial consonant (no clusters such as /tra/ or /bla/). A specific strategy is employed to write clusters of consonants, a system that is also found with other syllabic writing systems.

In the Meroitic writing system, as already revealed by Griffith and then by Hintze, the sign *e* is used as a fictitious vowel in a consonant series. In other words, this vowel is not pronounced, so only the consonant value is left in place. It will give this vowel multiple readings, for instance:

[e] in *ktke* “Candace” (= ruling queen) /kantake/, from Greek κανδάκη

[ə] in *tedxe* “begotten by” /tədaxə (?)/

zero in *peseto* “viceroys” /psentu/, from Greek ψεντης

Although this triple value of a vowel is also found in other syllabaries, they share the problem that the correct reading is complicated, particularly for an ancient language such as Meroitic. There are a few indications that suggest a particular reading for certain morphemes. The examples have a zero value from the beginning of the first century AD and perhaps from before that time. The postposition *-se* was almost certainly pronounced /s/ since it contracted to *-t* with the determinant *-l* that followed (known as Griffith's law). This would not be possible if the /s/ and the /l/ had been separated by a vowel. Similarly, the assimilation of *xrpxl* from *xrpxne* + *-l*, *sleqel* from *sleqene* + *-l*, *xbxl* from *xbxne* + *-l* shows that the final sound *-ne* that was used

in these titles was simply pronounced as /n/. The same phenomenon may be found in certain lexical items; for instance, *qore* “ruler,” with which the article *-l* has been assimilated from early times onward, is given an original pronunciation /qur/. Also, *pwrite* “life” was realized as /pawarit/, because preceding a word with an initial /a/, it is sometimes written *pwrīt*, to be read /pawarita/ (REM 1293).

A particular case of consonant clustering is found with nasals before plosives. Their existence is proven by the Egyptian and Greek transcriptions, although they are not indicated in the Meroitic writing system. This particularity was already observed by Griffith, and further examples were given by Zyhlarz (1930:418). For instance, *ktke* “Candace” is transcribed in Egyptian as *knt(i)ky* and in Greek as *κανδάκη*. Also *peseto* “viceroy” is in Greek *ψεντης* while another personal name, *Wyekiye*, had an Egyptian version, *Wyngy3*. It was shown that prenasalized consonants exist in the following forms: *nd*, *nt*, *nd*, *ng*, and *nx*.

A number of different theories may explain the absence of a notation for nasals, even though there are other examples of writing systems that do not write these. The nasals may simply have been removed from the writing system (Griffith 1911a:10,14, 1912:51, Meinhof 1921–22:5, Haycock 1978:67, Hainsworth 1979:378, Hintze 1987:46–47), or they may have formed a prenasalized version of the following plosive or fricative so that it is not an independent grapheme (Zyhlarz 1930:418, Hofmann 1982b:48, 1991:195, Zibelius 1983:56, 70, Böhm 1987:6, Peust 1999:208–209), or they may have only existed in Egyptian and Greek transcriptions as an artificial way to write voiced consonants (Priebe 1968:184–185, 1973:288). The last suggestion is perhaps the least convincing. For instance, the word *ant* “priest” is often written *at* in Late Meroitic. An evolution of /an(n)ata/ > /an(n)ta/ > /anta/ corresponds with the weakening of the vowel that was suggested earlier for late Meroitic. The final form /anta/ could be written *at*, just like *ktke* “Candace” for /kantake/. This alternative spelling is difficult to explain with only Priebe’s theory. This problem is further discussed in the section on Meroitic phonology.

5. Haplography

A particular case of consonants that follow each other is the geminated consonant or simply a repeated consonant. One speaks of “haplography” when the Meroitic system indicates only one of those consonants. It is also found in other writing systems and was already a frequent feature of Egyptian writing, although less systematic than in Meroitic.

Priese used haplography to explain certain evolutions. According to him the predicate *-lo(wi)* “it is,” which is used in descriptions as part of epitaphs, has a determinant *-l* that is concealed by haplography *-l + lo(wi) > -lo(wi)* (Priese 1971:277[1.14], 1979:117–118). Also, the origin of the form *wettrri*, found on an obscure epithet of Osiris in the formal invocations, is supposed to go back to *wettrri*, a form that is only attested once (Priese 1971:277[1.14], 1977:55). Finally, he also sees haplography in the origin of *mkdi* “goddess” for *mk* “god” + *kdi* “woman” (Priese 1977:41).

These three cases cannot be explained by simple haplography. The doubling of the *l*, *t*, and *k* should be interpreted as *-/lal/-*, *-/tat/-*, *-/kak/-* in the Meroitic writing system. Also the vowel /a/ between those two consonants may have been weakened over time, and this plays a role along with any haplography. This certainly would be the case for *mk + kdi*, less certainly for *wettrri*, and probably not for the form *-lo(wi)*, since the earliest written form is *-lo* and never **llo*.

Hintze (1973a:32, 1979:15), followed by Hofmann (1974a:45, note 8, 1981a:30, 1982a:50, 1982b:48), presents a theory that makes this phenomenon more insightful. It is noted that direct proof of haplography remains difficult since it is, by definition, not seen in writing. The three examples by Priese are in two cases already more complex than they seem and in the third case possibly so.

It is probably at the end of words and morphemes that some evidence can be found. Several place-names end in the graphic syllable *-te*, which probably corresponds with a final /t/. And yet the common locative suffix is also *-te*. There are, therefore, two possible forms: on the one hand, a doubling of *te* that conforms to the morphology, and, on the other, a single *te* that results from haplography:

Amnptete / *Amnpte* “Amun (who resides) at Napata”

Amnotete / *Amnote* “Amun (who resides) in the Town (Thebes)”

Nlotete / *Nlote* “at Karanog”

The existence of haplography could also be deduced from statistical observations. The sequence [consonant + *e* + consonant], the only way for the Meroites to create consonant clusters, is frequent when these consonants have a different articulation but is rare when they are identical. One only finds these by way of exception in the old texts (seven occurrences in REM 1044, which counts more than twenty-five hundred characters), and even then we can suppose that in the conjunction (?) *kek*, which is responsible for five of the seven occurrences, the central sign *e* represents the vowel [ə]. In the recent inscriptions, such as the corpus of texts from Qasr Ibrim, all

the clusters of this type have disappeared except one (in a priestly title *teter* in REM 1182).

The question presents itself whether this simplification of the geminated consonant is purely a graphic process, haplography, or a phonetic process, haplology. This is so far nearly impossible to answer.

6. Word Separation

There are two kinds of separations in Meroitic texts. The first is created by the separator, a discrete sign in the writing system. The second is the line break when a text goes from one line to another in an inscription. Both follow the syllabic principle so that the consonant is never separated from the vocal modifier (the vowel) that may follow. The separator should be placed at the end of a word following the logic of the Meroitic grammar, that is, after a fictitious vowel in cases when the word ends (phonetically) in a consonant. In practice, the logic of the syllabic writing system overlaps with the syntax.

If two words follow each other and the first has a final consonant that is followed by the initial vowel of the second word, then the separator appears before the first consonant of the second word since the initial vowel now seems part of the previous word. There is an illustrative example in the particular invocation *Woso : Soreyi* “O Isis-Osiris!” that is found instead of *Wos : Asoreyi*. In both cases, one should read [u:çauçuri:], but the division in the first is [u:çau] + [çuri:], while in the second it is [u:ça] + [uçuri:].

The loss in the script of certain initial vowels undoubtedly reinforced this phenomenon. Griffith (1911a:71) remarked that, although he could not explain it, he concluded that the absence of the initial vowel in *Amni* / *Mni* “Amun” and *Amnp* / *Mnp* “Amanap” was more rare after -e.

7. Orthographic Variations

All researchers since Griffith who have worked on Meroitic have observed and sometimes complained about the great variability of the writing. This is perhaps hardly surprising for a script that did not have a long tradition, had a population in rather dispersed urban areas, was found along a river system that extended two thousand kilometers, and, above all, had a simple and phonetic basis that was sensitive to diachronic, geographic, and individual variation. Next to these variations, there are frequent examples of different spellings at the same site and from the same era for the more commonly used terms. This is particularly true for the names of deities with a vocative. In Karanog there are epitaphs that all date to the second

half of the second century AD in which the variants *Soreyi*, *Soriyi*, and *Sorei* are found for “O Osiris” and *Wosi*, *Wisi* for “O Isis.” Trigger (1967:169) at Arminna found a variant of the verbs of the benedictions, written *kr* and *tk* instead of the usual *xr* and *tx*, and he suggests individual differences between scribes.

This orthographic freedom, surprisingly perhaps, also concerns proper names. Hainsworth (1979:378), for instance, presented a number of variants for the same personal names:

Axtkkid = *Axetkkid*

Sykeli = *Syokeli*

Boheye = *Boheyi*

Apoly = *Apilye*

Tmoye = *Tmiye*

Temye = *Tmiye*

Arotnide = *Teritnide*

Sometimes different spellings are found within the same text to the point that one may consider free variation and play with writing or pronunciation that may be part of a poetic or literary tradition. For instance, the adjective “abundant,” common for the benedictions A and B to qualify the water and bread offerings, is spelled *mhe* and then *mxe* (or the other way around) in about fifteen epitaphs on sites stretching from Karanog and Arminna to the island of Sai.

This orthographic variation draws attention since it often concerns important words (*Wos/Wis* “Isis,” *ktke/kdke/ktwe/kdwe* “Candace/queen”), but they are not very numerous and often concern vowels for which the Meroitic writing system does not offer an always clear and stable representation.

The graphic variations are of great interest to the study of Meroitic phonology. It may be useful to list the principal exchanges of signs that have been found. The first of these pairs represents the base form and the second part the variation with possible additional information about the context. They show a morphological evolution next to a phonetic or orthographic one, such as *yerikelowi* and *terikelowi*, but this order of development may not always be certain in every item of the following list:

List of phonetic or orthographic variants:

e ≈ *i* (quite frequent)

ex. *perite* ≈ *pirite* “agent” /a/

early period if retained ≈ *e* late period

ex. *pesto* /psantu/ ≈ *peseto*

“viceroys” *a* initial early period ≈ *ye*

ex. *arihlo* ≈ *yerehlo*, verb construction

late period (rare)

$b \approx p$ (very rare)	ex. <i>qorbse</i> \approx <i>qorpse</i> “servant of the kings”
$d \approx t$ (very rare)	ex. <i>kdke</i> \approx <i>ktke</i> “Candace”
e late period \approx /a/ late period (quite frequent)	ex. <i>tedxelowi</i> \approx <i>tdxelowi</i> “it is the child of”
$e \approx o$ (rare, sometimes local: Adda, Toshka)	ex. <i>mhe</i> \approx <i>mho</i> “abundant”
/xa/ \approx <i>a</i> (uncertain, only one example)	ex. <i>xmlo</i> \approx <i>amlol</i> “a good meal (?)”
$x \approx h$ (very rare)	ex. <i>mhe</i> \approx <i>mxe</i> “abundant”
$x \approx k$ (local: Arminna, Nag Gamus)	ex. <i>xr</i> \approx <i>kr</i> , verb of benediction B
$i \approx e$ (quite frequent)	ex. <i>Bedewi</i> \approx <i>Bedewe</i> “Meroe”
$k \approx w$ (very rare)	ex. <i>ktke</i> \approx <i>ktwe</i> “Candace”
n early period \approx <i>zero</i> late period (frequent)	ex. <i>ant</i> \approx <i>at</i> “priest”
$o \approx e$ (quite rare)	ex. <i>qowi</i> \approx <i>qwi</i> “it is the one who”
$o \approx i$ (rare)	ex. <i>Wos</i> \approx <i>Wis</i> “Isis”
$p \approx b$ (rare, limited to verbal prefixes)	ex. <i>psixrto</i> \approx <i>bsxrto</i> (< <i>xr</i>), verb form of benediction B
$q \approx k$ (very rare)	ex. <i>pqrtr</i> \approx <i>pktrtr</i> “prince,” “vizier (?)”
$q \approx w$ (dialect Lower Nubia, frequent)	ex. <i>qetrri</i> \approx <i>wetrri</i> , epithet of Osiris
$s \approx t$ (rare, perhaps dialect)	ex. <i>kdise</i> \approx <i>kdite</i> “sister”
$t \approx d$ (rare)	ex. <i>yetmde</i> \approx <i>yed:mde</i> “nephew / niece (?)”
$t \approx n$ (very rare)	ex. <i>yetmde</i> \approx <i>yenmde</i> “nephew / niece”
<i>wo</i> \approx <i>a</i> (archaic and very rare)	ex. <i>Wos</i> \approx <i>As</i> “Isis”
<i>ye</i> \approx <i>yi</i> (very rare)	ex. <i>Boheye</i> \approx <i>Boheyi</i> , personal name
<i>ye</i> late period \approx <i>e</i> early period (very frequent)	ex. <i>yerikelo</i> \approx <i>erikelo</i> “it is the parent of”
<i>yi</i> late period \approx <i>i</i> early period (few occurrences)	ex. <i>yireqw</i> \approx <i>ireqw</i> “toward the south”
<i>yi</i> \approx <i>y</i> (quite frequent)	ex. <i>yirewke</i> \approx <i>yrewke</i> “east”

C. ORTHOGRAPHIC MISTAKES

One must take the greatest of care before a written item in Meroitic is considered a mistake. The absence of strict norms in the orthography, the existence of sometimes complex processes to address the imperfections of

the syllabic system, and our limited understanding of the language should make such an opinion rare and a last resort (Hofmann 1981a:27).

Nevertheless we cannot exclude the existence of mistakes in spelling, particularly since in some words entire syllables are missing and since some texts are of poor quality. It is with good reason that Griffith (1911a:33, 37) in Karanog has taken *Areyi* (REM 0293) to be *Asoreyi* “O Osiris,” *tedlowi* (REM 0382) to be *tedxelowi* “it is the child of,” and *terilowi* (REM 0380) to be *terikelowi* “it is the begotten one of.”

On the other hand, Griffith was too swift to judge *Woso* (REM 0311), as mentioned earlier, to be of the same kind, even though it was in his time the only occurrence of this spelling.

Quite often the mistakes are only absentmindedness or negligence and often caused by a changing of lines or a lack of space, such as the incomplete rendering of *Soryi* (REM 0315) or *Sorey* (REM 0423). There may be additional confusion with the inclusion of different signs, for instance, *w* for *s* in the final invocation *Wowi* (for *Wosi*) in REM 1195.

In certain texts, found at the northern frontier of the Meroitic Kingdom and written in a very late period (REM 1202–1220 of Qustul and Ballana), there is a lesser understanding of the language and the writing system, probably because the use of Meroitic was in decline.

Finally, it should be recognized that many mistakes attributed to the Meroites are in fact reading errors or copying mistakes by various scholars who have been active in this field. They are inevitable mistakes because of the poor state of many of the inscriptions, their rarity and the bad quality of the copies that are used, and, above all, the difficulty of working with texts that one cannot yet fully understand.

D. GRAPHIC INCOMPATIBILITY AND READING MISTAKES

A number of sign combinations are impossible in Meroitic, and they may prevent confusion when reading certain texts. The syllabic system explains these impossibilities. A combination of two vowel signs is only possible with *i* and *e*, which had a syllabic value in early times. Still rare and archaic, one finds *Sorei* “O Osiris” more often written *Soreyi* with a -y- for spelling reasons only and *Sxie*, a personal name perhaps meaning “the small one” (REM 0540), in which case the more current spelling is *Sxiye*. The combinations **ao*, **eo*, **io*, **oo* are impossible because *o* cannot have a syllabic value. The combinations **ee*, **ii* are also impossible, mainly because of haplography. Finally, **ae*, **ai*, **oi*, and **oe* have also never been attested.

Similarly, the four syllabic signs with a fixed vowel value, *ne*, *se*, *te*, *to*, cannot be followed by a vocalic sign. Also, these syllables are not rendered by a consonant + vowel sign, such as *n + e* or *t + o*. The combinations **ko* and **xo* are impossible because prior to a vowel [u], the labialized velar consonants *q* and *h* are used, so instead one finds *qo* and *ho* (Rilly 1999:105–106). It is noted that *qi* and *hi* are rare; indeed, labialization before this vowel is unexpected. Finally, the combination of two identical consonants separated by an *e* is extremely rare in early Meroitic writing and limited to one or two words in the later period.

E. PALEOGRAPHY

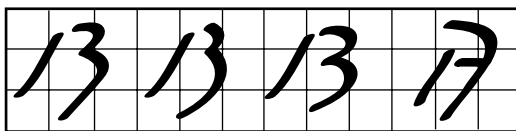
Despite the apparent simplicity of the writing system, the Meroitic texts are not easily deciphered. The inventory of signs is limited to twenty-three characters in cursive, not counting the separator, and the same for the hieroglyphic. Also the signs do not have complex or indistinguishable ligatures such as in Demotic. Instead other difficulties present themselves. Many texts are in a bad state: The stone that is used in Nubia is often crumbly, and the exposure to extreme temperatures (from 52°C to –2°C in Wadi Halfa), the rains in the South, and the continuous wind that carries tons of sands all lead to erosion that damages the texts that are exposed, in particular those on offering tables or those on official stelae.

Although Meroitic is also written in ink, this is part of a limited corpus that dates mostly to the third century AD, of which an important part is not yet published and/or studied. Most of the Meroitic inscriptions are found in stone, and the main corpus of these inscriptions has been recorded and transcribed by Griffith and his successors. The paleography of Meroitic is given here for the “late transitional” period or “transitional C,” which has become a canonical form of Meroitic in the literature and is found in the main part of the Meroitic inscriptions. Additional paleographic tables indicate the development of each sign that can be used for further comparison.

For the purpose of distinguishing signs in Meroitic the description concentrates on their form and their ductus (the number of lines and the order of lines with which to draw a sign). The grid that is used shows the angle and width of the sign. The horizontal lines of the grid indicate the base line of writing.

1. The Paleographic Description of the Cursive Script

The cursive script is mostly functional so that a precise or an aesthetically pleasing rendering of the graphs is often absent. Moreover, many signs

Figure 2.1: Ductus of *ho*, *mo*, *so*, and *q* in Meroitic cursive

are very close in appearance. It seems evident that the Meroites were sufficiently familiar with their script to understand the words as a whole, quasi-ideographic, by way of their overall appearance. With the exception perhaps of personal names, they did not read sign by sign. As a result, they did not need the signs to be strictly distinguished. In the course of centuries the signs slowly converged, as will be demonstrated later. Unfortunately, since we do not understand the language, we cannot, as the Meroites did, use the context to make sure that our reading is correct, except perhaps for some stereotypical formulas in the funerary texts.

Signs are particularly confusing in the case of *e* / *l* / *t*, in later times *b* / *d*, also *p* / *k*, and always *h* / *m* / *s*, where the context is often needed to sort them out (see Figures 2.1 and 2.2). Certain combinations of signs are ambiguous by themselves: In the later period, the combination *ho* / *mo* / *so* can no longer be distinguished from *q*, and the sequence *ke* coincides with *a*.

A note on the distinction between *h* / *m* / *s* is in order before the paleographic tables are presented. In most of the texts the *h* and *m* are practically indistinguishable, and in the later period the *s* can also be taken for an *h*. If followed by an *o*, it is also confused with a *q* of the late period. In some archaic (REM 0405A and B, 0832, 0833, 1044) and transitional (REM 0628, 1041, 1141, 1293, 1294) texts, the *h* has a small vertical line that connects the two curved strokes, and this distinguishes *h* perfectly from *m*. But this is not generally so in all documents, and it completely disappears at the end of the first century AD. The following list of criteria should assist in distinguishing these three signs:

Upper curved stroke:

- ▶ very small and often rounded for *m*;
- ▶ small and often flattened into a triangle for *h*;
- ▶ much more so for *s*.

Angle between the two curved strokes:

- ▶ hardly any, sometimes absent for *m*, which may have only one curved stroke;

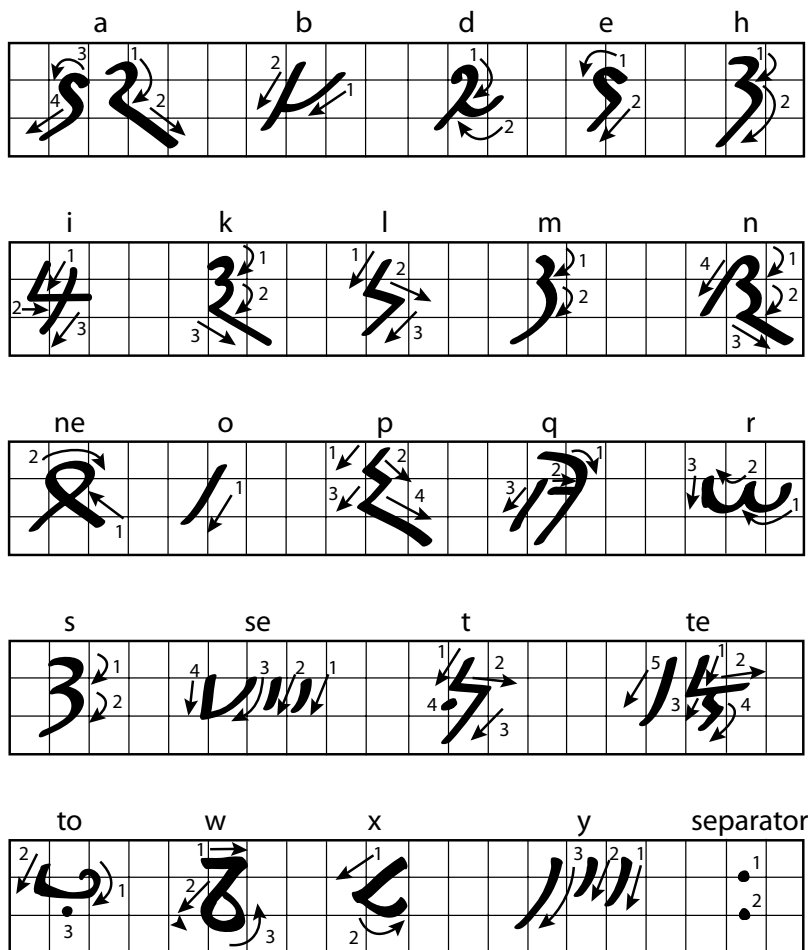


Figure 2.2: Ductus of the Meroitic cursive script

- ▶ more pronounced, but not prominent for *h*;
- ▶ very pronounced and often prominent for *s*.

Lower curved stroke:

- ▶ gently curved for *m*;
- ▶ often upright for *h*;
- ▶ strongly hooked for *s*.

The axis of the sign:

- ▶ clearly tilted to the right for *m*;

- ▶ gently tilted to the right for *h*;
- ▶ vertical for *s*.

2. Form and Evolution of the Hieroglyphic Signs

There is no true paleography for the hieroglyphic signs. Contrary to the cursive scripts, they are figurative signs that do not undergo much innovation without losing their figurative characteristics. Moreover, the hieroglyphs of the Meroites did not make a script that was meant for communication, even less so than in Egypt. It was a sacred script, reserved for ceremony and royalty, that possessed impressive magical value and undoubtedly was subject to taboos. The few nonroyal counterexamples have a mixture of hieroglyphic and cursive script (REM 1222, REM 1046A and B, REM 0704). The hieroglyphic script was conservative not only to preserve its realism but also to keep its supernatural properties. The changes that can be found are small and almost insignificant.

There are only a limited number of hieroglyphic texts. There are about fourteen very short texts, sometimes consisting of only a few signs. There are three texts with a wider scope but of the same era and found at the Lion Temple, the temple of Amun in Naga, and the temple of Amara. It is, therefore, difficult to reconstruct any evolution of this script. It is obviously not uninteresting to detect certain tendencies that are related to certain periods, but these cannot yet be used for dating purposes.

The signs for *a*, *k*, *l*, *o*, *s*, *t*, *te*, *w*, *y* do not seem to have had significant changes in the course of the centuries. The sign for *p* has changed much, but there appears little coherence in the variations. This is also true for the sign *h*, but its uncommon appearance makes a study of its evolution problematic. The eleven remaining signs are perhaps the most interesting for comparison across time.

3. The Paleographic Tables and the Dating of Texts

The most acute problem for historians of the Meroitic civilization is the absence of dates in Meroitic texts. Contrary to the Egyptian tradition, the important documents do not have any indication of a regnal year, not even the royal stelae. This is a curious phenomenon since the Napatan stelae, even the most recent, provide a date, and Demotic graffiti that mention a Meroitic ruler also indicate his or her regnal year. It is, therefore, difficult to place the kings or queens of Meroe in a chronology. There are not more than three or four absolute dates for contemporaries of kings in the Roman

or Lagide dynasties. In view of these circumstances, paleography has a crucial role to play.

The earliest attempt toward a paleography of Meroitic was made by Griffith (1911a:17–21), who also introduced three characteristic periods:

Archaic: The shapes are often vertical, partially following the contours of hieroglyphs; sometimes a less rigid variant appears. They are mostly attested in the South and date from the period before 25 BC.

Transitional: The signs from this period are attested in Karanog, north of Naga in the South, between 25 BC and AD 250.

Late: Signs are strongly inclined, having lateral extensions. These signs are attested everywhere, from Philae to Naga, between AD 250 and AD 400.

Griffith's attempt was followed by a few others, of which Hofmann's (1991:127) is perhaps the most detailed and complete. She distinguishes six types, and three variations of the fifth type; hence a detailed chronology based on a representative collection of texts is provided.

The following paleographic tables are built on the foundation of these predecessors but also use recent discoveries from Sai, Dukki Gel, and Naga. The period names of Griffith are reused but given subgroups that cover periods of between 70 and 120 years. The resulting tables have already been used extensively, and with proven reliability when parallel texts have confirmed the paleographic dating.

Tables 2.2 to 2.5 provide a classification of seventy-one texts chosen from all types of documents and taken from diverse geographic locations in order to guarantee a most representative sample. The periods are defined as follows:

Archaic A: up until the first half of the second century BC

Archaic B: from the first half to the end of the second century BC

Transitional A: from the end of the second to the end of the first century BC

Transitional B: first century AD

Transitional C: second century AD until the beginning of the third century AD

Late A: AD 230–300

Late B: AD 300–420

Still, one may not conclude from these tables that all resulting dates are valid. The dating of a text or object requires archaeological and historical interpretation in which paleography can play an important role but not an exclusive one.

Table 2.2: Paleographic table of cursive Meroitic (archaic)

Archaic A														Archaic B									
Reference site	Dukki Gal 1 Kerma	Dukki Gal 2 Kerma	REM 0405A Meroe	REM 0632 Kawa	REM 0617 Kawa	REM 0694 Kawa	REM 0635 Kawa	REM 0641 Kawa	REM 0707 Kawa	REM 0621 Kawa	REM 0636 Kawa	REM 0637 Kawa	REM 0700 Kawa	REM 0435 Meroe	REM 0434 Meroe	REM 0425 Meroe	REM 0428 Meroe	REM 0833 Meroe	REM 0832 Meroe	REM 0405B Meroe	REM 0127 Meroe	REM 1044 Barkal	
a					ʔ	ʔ	ʔ	ʔ		ʔ	ʔ	ʔ	ʔ	ʔ	ʔ	ʔ	ʔ	ʔ	ʔ	ʔ		ʔ	
b		ʔ										ʔ									ʔ	ʔ	
d	ʔ	ʔ	ʔ	ʔ		ʔ	ʔ			ʔ	ʔ		ʔ		ʔ	ʔ	ʔ	ʔ	ʔ	ʔ	ʔ	ʔ	
e	ʔ	ʔ	ʔ	ʔ			ʔ	ʔ	ʔ	ʔ	ʔ	ʔ		ʔ	ʔ	ʔ	ʔ	ʔ	ʔ	ʔ	ʔ	ʔ	
x									ʔ						ʔ	ʔ	ʔ	ʔ	ʔ	ʔ	ʔ	ʔ	
h			ʔ	ʔ				ʔ		ʔ	ʔ	ʔ						ʔ	ʔ	ʔ		ʔ	
i		ʔ	ʔ	ʔ	ʔ	ʔ		ʔ	ʔ	ʔ	ʔ	ʔ	ʔ	ʔ	ʔ	ʔ	ʔ	ʔ	ʔ	ʔ	ʔ	ʔ	
k		ʔ	ʔ	ʔ					ʔ	ʔ	ʔ	ʔ				ʔ	ʔ	ʔ	ʔ	ʔ	ʔ	ʔ	
l	ʔ		ʔ					ʔ	ʔ			ʔ	ʔ	ʔ	ʔ	ʔ	ʔ	ʔ	ʔ	ʔ	ʔ	ʔ	
m		ʔ						ʔ	ʔ	ʔ	ʔ					ʔ	ʔ	ʔ	ʔ	ʔ	ʔ	ʔ	
n					ʔ	ʔ	ʔ	ʔ	ʔ									ʔ	ʔ	ʔ	ʔ	ʔ	
ne								ʔ	ʔ	ʔ		ʔ			ʔ			ʔ	ʔ	ʔ	ʔ	ʔ	
o				ʔ	ʔ			ʔ	ʔ	ʔ	ʔ	ʔ	ʔ	ʔ	ʔ	ʔ	ʔ	ʔ	ʔ	ʔ	ʔ	ʔ	
p						ʔ				ʔ	ʔ	ʔ				ʔ			ʔ	ʔ	ʔ	ʔ	
q	ʔ		ʔ	ʔ												ʔ		ʔ	ʔ	ʔ	ʔ	ʔ	
r	ʔ		ʔ	ʔ		ʔ	ʔ	ʔ	ʔ	ʔ	ʔ	ʔ		ʔ	ʔ	ʔ	ʔ	ʔ	ʔ	ʔ	ʔ	ʔ	
s				ʔ					ʔ				ʔ	ʔ	ʔ	ʔ	ʔ	ʔ	ʔ	ʔ	ʔ	ʔ	
se		ʔ		ʔ									ʔ	ʔ	ʔ			ʔ	ʔ			ʔ	
t				ʔ	ʔ	ʔ	ʔ		ʔ	ʔ	ʔ	ʔ	ʔ	ʔ	ʔ			ʔ	ʔ	ʔ	ʔ	ʔ	
te	ʔ		ʔ					ʔ							ʔ			ʔ	ʔ	ʔ	ʔ	ʔ	
to	ʔ		ʔ													ʔ	ʔ	ʔ	ʔ	ʔ	ʔ	ʔ	
w	ʔ		ʔ			ʔ					ʔ	ʔ	ʔ			ʔ	ʔ	ʔ	ʔ	ʔ	ʔ	ʔ	
y						ʔ										ʔ	ʔ	ʔ	ʔ	ʔ	ʔ	ʔ	
separator			ʔ												ʔ	ʔ	ʔ	ʔ	ʔ	ʔ	ʔ	ʔ	

4. Additional Signs

Both the hieroglyphic and cursive script contain unusual signs, such as purely Egyptian hieroglyphs, archaic signs, or atypical forms, with an often unclear meaning. In some cases, such as in the archaic inscription of REM 0401, it is not even clear whether the text should be considered Egyptian or an archaic Meroitic one. In most cases, however, the number of these unusual signs is small.

Table 2.3: Paleographic table of cursive Meroitic (transitional A, B, and C)

Transitional A											Transitional B										
Reference site	REM 0412 B & C Meroe	REM 0092 Dakka	REM 0093 Dakka	REM 1003 Hamadab	REM 0628 Kawa	REM 1141 Qasr Ibrim	REM 1294 Naga	REM 1293 Naga	REM 1041 Meroe	REM 0126 Meroe?	REM 1089 Barkal	REM 0077-8 Barkal	REM 1001 Meroe?	REM 1038 Meroe	REM 0521 Faras	REM 1282 Naga	REM 1092 Sedeinga	REM 1115 Sedeinga	REM 0543 Faras	REM 0440 Meroe	REM 0816 Meroe
a	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52
b		4.4	4	4.4		4	4.4	4	4.4	4			4.4	4	4.4		4	4	4	4	4
d	2.2	2	2.2	2.2	2.2	2.2	2	2.2	2.2	2.2	2	2	2	2	2		2	2	2		2
e	5.5	5.5	5.5	5.5	5.5	5.5	5	5.5	5	5.5	5.5	5.5	5	5.5	5.5	5	5	5.5	5	5	5.5
x		4	4.4	4.4		4	4	4	4	4.4			4		4	4	4	4	4	4	4
h			3	3.3	3	3	3	3	3		3?				3.3		3		3	3	3
i	4.4	4.4	4	4	4.4	4	4	4.4	4	4	4.4	4	4	4	4.4		4.4		4	4.4	4.4
k	2.2	2.2	2.2	2	2.2	2.2	2	2.2	2	2.2	2	2	2	2	2		2	2	2	2	2.2
l	5	5	5.5	5.5	5.5	5.5	5	5	5.5	5	5.5		5	5.5	5.5		5.5	5.5	5.5	5.5	5.5
m	3	3		3.3	3.3	3.3	3.3	3	3	3	3.3	3	3	3	3.3	3.3	3	3	3.3	3	3.3
n	2	2	2	2.2	2.2	2	2	2	2	2	2	2	2		2	2	2		2		2.2
ne		2	2	2		2.2	2	2	2	2.2			2		2					2	
o	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
p	2	2	2	2.2	2.2	2	2	2	2	2	2	2.2	2		2		2		2	2	2.2
q	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
r	w	w	w	w	w	w	w	w	w	w	w	w	w	w	w	w	w	w	w	w	w
s	3.3	3	3	3.3	3.3	3.3	3.3	3	3			3.3	3?		3.3	3	3	3	3.3	3.3	3.3
se	v	v	v	v	v	v	v	v	v			v	v	v	v	v	v	v	v	v	v
t	7	7	7	7.7	7	7.7	7	7	7	7		7.7	7	7	7.7		7	7.7	7.7	7.7	7.7
te	1.4	1.4		1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
to	6	6.6	6.6	6.6		6.6	6	6	6	6					6.6	6		6.6	6	6	6
w	2.2	2.2	2	2.2	2.2	2.2	2	2.2	2	2	2.2	2.2	2		2.2	2		2	2	2	2.2
y	///	///	///	///		///	///		///	///	///	///	///	///	///			///	///	///	///
separator	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:

The Egyptian hieroglyphs are only used in the royal titles and benedic-
tions, as well as in cartouches of rulers: in particular, 𓆎 , that is, nh “may he live”
(REM 0001, 0019), sometimes repeated three times (REM 0046); 𓆑 , that is,
 s3-R^c “son of Ra” (REM 0832, 1294C); or 𓆒 , that is, nb t3.wy “lord of the Two-
Lands” (REM 0002); or even 𓆓 , that is, bity “king” (REM 0017, 1294C).

In three of the oldest offering tables of Meroe (REM 0425, 0428, 0434)
there is a square sign, alternatively fitted with a small stroke on the left or

Transitional C

Reference site	REM 0246 Meroe	REM 0323 Karanog	REM 1138 Barkal	REM 0294 Karanog	REM 0509 Faras	REM 0300 Karanog	REM 1273 Sai	REM 1144 Sedeinga	REM 0424 Meroe	REM 0314 Karanog	REM 0327 Karanog	REM 1249 Sai
a	52		52	52	52	52	52	52	52	52	52	52
b	✓		✓				✓			✓	✓	✓
d	2	2?	22	2	2	2,2	2	2	2	2	2	2
e	5,5	5	5	5,5	5,5	5,5,5	5,5	5,5	5,5	5,5	5,5	5
x	⊂	⊂,⊂	⊂,⊂	⊂,⊂	⊂,⊂	⊂,⊂	⊂	⊂,⊂	⊂,⊂	⊂,⊂	⊂,⊂	⊂
h	3	3		3	3,3	3,3	3,3	3	3	3,3	3,3	3
i	4	4	4	4	4	4	4	4	4	4,4	4	4
k	2,2	2	2	2,2	2	2,2	2,2	2	2	2	2	2
l	5,5	5,5	5,5,5	5	5	5	5,5	5	5	5	5	5,5
m	3	3,3	3	3,3	3	3	3,3	3	3	3	3	3
n	2	2,2	2	2				2		2		
ne			2,2	2,2				2				
o	/	/	/	/	/	/	/	/	/	/	/	/
p		2,2		2		2,2	2,2	2	2	2	2,2	2
q	13	13	13,13	13,13	13	13,13	13	13,13		13	13,13	13,13
r	ω	ω	ω	ω,ω	ω	ω	ω	ω,ω		ω	ω,ω	ω
s	3,3	3,3	3,3	3,3	3	3,3	3,3	3,3	3,3	3,3	3,3	3,3
se		2,2	2,2			2,2		2,2	2,2			2,2
t	5		5,5,5	5	5,5	5	5,5	5,5	5	5	5	5,5
te	15	15,15	15,15	15	15	15	15,15	15,15	15	15,15	15	15
to	⊂		⊂,⊂	⊂,⊂	⊂,⊂	⊂,⊂	⊂	⊂,⊂	⊂,⊂	⊂	⊂,⊂	⊂
w	8	8	8,8	8,8	8	8,8	8,8	8,8	8	8	8,8	8
y	11	11	11	11	11	11	11	11	11	11	11	11
separator	:	:	:	:	:	:	:	:	:	:	:	:



the right, , which is used to write -si in Wosi "O Isis." A number of hypotheses for the origin of this sign have been proposed, but Griffith's suggestion (1911b:75) that it may have been from the Egyptian hieroglyph , which represents a basin (Coptic *ⲙⲏ*), still holds. It is an ancient syllabic sign for the sequence -si for Wosi, a vocative that was undoubtedly pronounced [u:çai]. The sign may, therefore, have had the value [çai]. The understanding of this sign is complicated by the occurrence of another

Table 2.4: Paleographic table of cursive Meroitic (late)

	Late period A												Late period B				
Reference site	REM 0250 Karanog	REM 0259 Karanog	REM 0379 Shablul	REM 1065 Arminna	REM 0502 Faras	REM 1088 Karanog	REM 0829 Meroe	REM 0277 Karanog	REM 0544 Faras	REM 1096 Arminna	REM 1236 Sai	REM 0101 Phillae	REM 1183 Qasr Ibrim	REM 0120 Phillae	REM 1208 Ballana	REM 0094 Kalabsha	
a	ⲁ	ⲁ	ⲁ	ⲁ	ⲁ	ⲁ	ⲁ	ⲁ	ⲁ		ⲁ	ⲁ	ⲁ		ⲁ	ⲁ	
b	ⲃ	ⲃ	ⲃ	ⲃ		ⲃ		ⲃ	ⲃ	ⲃ	ⲃ	ⲃ	ⲃ	ⲃ	ⲃ	ⲃ	
d	Ⲅ	Ⲅ	Ⲅ	Ⲅ	Ⲅ	Ⲅ	Ⲅ	Ⲅ	Ⲅ	Ⲅ	Ⲅ	Ⲅ	Ⲅ		Ⲅ	Ⲅ	
e	ⲅ	ⲅ	ⲅ	ⲅ	ⲅ	ⲅ	ⲅ	ⲅ	ⲅ	ⲅ	ⲅ	ⲅ	ⲅ	ⲅ	ⲅ	ⲅ	
x	Ⲇ	Ⲇ	Ⲇ	Ⲇ	Ⲇ	Ⲇ	Ⲇ	Ⲇ	Ⲇ		Ⲇ	Ⲇ	Ⲇ		Ⲇ	Ⲇ	
h	ⲇ	ⲇ	ⲇ	ⲇ	ⲇ	ⲇ		ⲇ	ⲇ	ⲇ	ⲇ	ⲇ	ⲇ	ⲇ	ⲇ	ⲇ	
i	Ⲉ	Ⲉ	Ⲉ	Ⲉ	Ⲉ	Ⲉ	Ⲉ	Ⲉ	Ⲉ	Ⲉ	Ⲉ	Ⲉ	Ⲉ	Ⲉ	Ⲉ	Ⲉ	
k	ⲉ	ⲉ	ⲉ	ⲉ	ⲉ		ⲉ	ⲉ	ⲉ	ⲉ	ⲉ	ⲉ	ⲉ		ⲉ	ⲉ	
l	Ⲋ	Ⲋ	Ⲋ	Ⲋ	Ⲋ	Ⲋ	Ⲋ	Ⲋ	Ⲋ	Ⲋ	Ⲋ	Ⲋ	Ⲋ	Ⲋ	Ⲋ	Ⲋ	
m	ⲋ	ⲋ	ⲋ	ⲋ	ⲋ	ⲋ	ⲋ	ⲋ	ⲋ	ⲋ	ⲋ	ⲋ	ⲋ	ⲋ	ⲋ	ⲋ	
n	Ⲍ	Ⲍ	Ⲍ		Ⲍ	Ⲍ	Ⲍ	Ⲍ	Ⲍ	Ⲍ	Ⲍ	Ⲍ	Ⲍ	Ⲍ		Ⲍ	
ne		Ⲏ			Ⲏ	Ⲏ		Ⲏ	Ⲏ	Ⲏ	Ⲏ	Ⲏ	Ⲏ			Ⲏ	
o	ⲏ	ⲏ	ⲏ	ⲏ	ⲏ	ⲏ	ⲏ	ⲏ	ⲏ	ⲏ	ⲏ	ⲏ	ⲏ	ⲏ	ⲏ	ⲏ	
p	Ⲑ	Ⲑ	Ⲑ	Ⲑ		Ⲑ	Ⲑ	Ⲑ	Ⲑ	Ⲑ	Ⲑ	Ⲑ	Ⲑ		Ⲑ	Ⲑ	
q	ⲑ	ⲑ	ⲑ	ⲑ	ⲑ	ⲑ	ⲑ	ⲑ	ⲑ	ⲑ	ⲑ	ⲑ	ⲑ	ⲑ		ⲑ	
r	Ⲓ	Ⲓ	Ⲓ	Ⲓ	Ⲓ	Ⲓ	Ⲓ	Ⲓ	Ⲓ	Ⲓ	Ⲓ	Ⲓ	Ⲓ	Ⲓ	Ⲓ	Ⲓ	
s	ⲓ	ⲓ	ⲓ	ⲓ	ⲓ	ⲓ	ⲓ	ⲓ	ⲓ	ⲓ	ⲓ	ⲓ	ⲓ	ⲓ	ⲓ	ⲓ	
se	Ⲕ	Ⲕ		Ⲕ		Ⲕ	Ⲕ	Ⲕ	Ⲕ	Ⲕ	Ⲕ	Ⲕ	Ⲕ	Ⲕ	Ⲕ	Ⲕ	
t	ⲕ	ⲕ	ⲕ	ⲕ	ⲕ	ⲕ	ⲕ	ⲕ	ⲕ	ⲕ		ⲕ	ⲕ	ⲕ	ⲕ	ⲕ	
te	Ⲍ	Ⲍ	Ⲍ	Ⲍ	Ⲍ	Ⲍ	Ⲍ	Ⲍ	Ⲍ	Ⲍ	Ⲍ	Ⲍ	Ⲍ	Ⲍ	Ⲍ	Ⲍ	
to	ⲍ	ⲍ	ⲍ	ⲍ	ⲍ	ⲍ		ⲍ	ⲍ	ⲍ	ⲍ	ⲍ	ⲍ		ⲍ	ⲍ	
w	ⲗ	ⲗ	ⲗ	ⲗ	ⲗ	ⲗ	ⲗ	ⲗ	ⲗ	ⲗ	ⲗ	ⲗ	ⲗ	ⲗ	ⲗ	ⲗ	
y	Ⲙ	Ⲙ	Ⲙ	Ⲙ	Ⲙ	Ⲙ	Ⲙ	Ⲙ	Ⲙ	Ⲙ	Ⲙ	Ⲙ	Ⲙ	Ⲙ	Ⲙ	Ⲙ	
separator	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	:	

similar sign on the grand stèle of Taneyidamani (REM 1044). Despite several suggestions (see Rilly 2007:353–354), there is no clear reading for this sign, which has been reproduced as 𐎢.

5. Numerals

Meroitic numerals are only frequent on the ostraca, and one rarely finds more than a dozen. For numerals higher than 40, there are only rare instances, notably on the royal stelae or in certain “obscure passages” of the epitaphs.

A number of signs only occur once, such as those for 80 and 700, and some do not seem to have any examples, such as 60, 90, 400, 900, 4000, or above 5000. Some numerals are difficult to read, particularly on the stele of Amanishakheto at Qasr Ibrim (REM 1141) and on the stele of Abratoye. It is, therefore, not yet possible to present an evolution of the Meroitic numerals.

The signs for 10, 20, 40, and 50 resemble the late but unusual hieratic equivalents, and, for instance, those for 6, 40, 100, and 300 are more similar to the late but common hieratic signs. The majority of the numerical signs have a striking resemblance with the corresponding Ptolemaic signs, and this is the case for 6, 8, 9, 30, 50, 80, 100, 200, 300, and 800. It seems that some numerals were a local development, such as 5, 7, 500, and $1/2$, but that most derived, similar to the cursive script, from ancient Ptolemaic. There is, for instance, the same curious ambiguity between the signs for 8 and 9.

As in Egyptian, the numerals follow the items that are quantified. While in Egyptian it seems that the order is purely graphic (Gardiner 1957:193), in Meroitic, where the determinant always follows that which is being determined, the order corresponds quite probably to a linguistic reality. The noun, as in Egyptian and many other languages, remains in the singular form, so that REM 1088/16–17 reads: *nob 735 ked*, “I killed (?) 735 Noba.”

The separator may follow the number sign (e.g., in REM 1138), but it never separates the number from the entity that it quantifies. Sometimes the numeral is followed by a determinant *-ni*. This may correspond with an ordinal number. It seems to have much in common with the Egyptian suffix *-nw(.t)* with the same value, but this interpretation is not yet universally accepted (see Millet 1982:78–79).

Apart from a table that lists the Meroitic numerals, based on Griffith (1916a) but enriched with many new examples as well as corrections from Hallof (2009), there is a series of points that indicates fractions. This system is independent of what is known in Egypt. In both cursive and hieroglyphic Meroitic, a fraction $1/x$ is represented by a numeral underneath the character for *x*. It is a duodecimal system so it works with multiples of 12 rather than 10 as was common in Egypt.

6. Units of Measurement


On some ostraca and fragments of papyrus there are a number of particular signs that precede a numeric indication (see Table 2.6). There are a “corn spike” or “brush”  and another sign in the shape of an arrow point

Table 2.5: Paleographic table of Meroitic hieroglyphs

Natakamani Amanitore Arikankharor Arakakhatani Shorakaror															Amanakharsqerem		Amanitenmomide		Aritene-Yesbokhe		Takideamani		Teqorideamani		End of 3rd or 4th C. AD	
Reference site	REM 0003-20 Naga	REM 0415 Meroe	REM 0041 wad Ben Naga	REM 0023-38 Naga	REM 0084 Amara	REM 0001 Soba ?	REM 1151 El-Hassa	REM 0066-67 Meroe	REM 0823A/B Meroe	REM 0060 Meroe	REM 0828 Meroe	REM 1145 Argo	REM 1046A/B Medak	REM 1222 El-Hobagi												
a																										
b																										
d																										
e																										
x																										
h																										
i																										
k																										
l																										
m																										
n																										
ne																										
o																										
p																										
q																										
r																										
s																										
se																										
t																										
te																										
to																										
w																										
y																										
separator																										

		2nd century BC		Taneyidamani	Shanaklakhete	Akinidad	Amanishakheto				Amanikhabele						
Reference site		REM 0401 Meroe	REM 0832A Meroe	REM 1044A Barkal	REM 0039A/B Naga	REM 0402 Meroe	REM 0705 Kawa	REM 0055 Meroe	REM 0056 Meroe	REM 1294 Naga	REM 0706 Kawa	REM 1055 Wad Ben Naga	REM 0046 Basa	REM 0802 Meroe	REM 1026 Kawa	REM 1040 Naga	REM 1004 Barkal
a																	
b																	
d																	
e																	
x																	
h																	
i																	
k																	
l																	
m																	
n																	
ne																	
o																	
p																	
q																	
r																	
s																	
se																	
t																	
te																	
to																	
w																	
y																	
separator																	

Table 2.6: Paleographic table of Meroitic numerals

Digit	Late Hieratic 9th – 3rd C. BC (Griffith 1916a)	Hieratic anormal 9th – 6th C. BC (Griffith 1916a)	Early Demotic 8th – 6th C. BC (Griffith 1916a)	Ptolemaic Demotic 4th – 1st C. BC (Griffith 1916a)	Demotic (Erichsen 1940)	Meroitic
1	𐩦	𐩦	𐩦	𐩦	𐩦; 𐩦	𐩦
2	𐩧	𐩧	𐩧	𐩧	𐩧; 𐩧; 𐩧	𐩧
3	𐩨	𐩨	𐩨; 𐩨	𐩨	𐩨; 𐩨; 𐩨	𐩨
4	𐩩	𐩩	𐩩	𐩩	𐩩; 𐩩; 𐩩; 𐩩	𐩩
5	𐩪	𐩪	𐩪; 𐩪	𐩪	𐩪; 𐩪; 𐩪	𐩪; 𐩪; 𐩪; 𐩪
6	𐩫	𐩫; 𐩫	𐩫; 𐩫	𐩫; 𐩫	𐩫; 𐩫; 𐩫; 𐩫	𐩫; 𐩫; 𐩫; 𐩫
7	𐩬	𐩬; 𐩬	𐩬	𐩬	𐩬; 𐩬; 𐩬	𐩬; 𐩬; 𐩬; 𐩬
8	𐩭		𐩭	𐩭	𐩭; 𐩭; 𐩭	𐩭; 𐩭; 𐩭
9	𐩮	𐩮	𐩮; 𐩮	𐩮	𐩮; 𐩮; 𐩮	𐩮; 𐩮; 𐩮; 𐩮
10	𐩯	𐩯; 𐩯; 𐩯	𐩯	𐩯	𐩯; 𐩯; 𐩯	𐩯; 𐩯; 𐩯; 𐩯
20	𐩰; 𐩰	𐩰; 𐩰; 𐩰	𐩰; 𐩰	𐩰	𐩰; 𐩰; 𐩰; 𐩰	𐩰; 𐩰; 𐩰
30	𐩱; 𐩱	𐩱	𐩱; 𐩱; 𐩱	𐩱; 𐩱	𐩱; 𐩱; 𐩱; 𐩱	𐩱; 𐩱
40	𐩲	𐩲	𐩲	𐩲	𐩲; 𐩲; 𐩲	𐩲; 𐩲; 𐩲
50	𐩳	𐩳; 𐩳; 𐩳	𐩳; 𐩳	𐩳; 𐩳	𐩳; 𐩳; 𐩳; 𐩳	𐩳; 𐩳; 𐩳; 𐩳
70	𐩴		𐩴	𐩴; 𐩴	𐩴; 𐩴; 𐩴; 𐩴	𐩴; 𐩴; 𐩴; 𐩴
80	𐩵		𐩵	𐩵; 𐩵	𐩵; 𐩵; 𐩵	𐩵 (?)
100	𐩶		𐩶	𐩶	𐩶; 𐩶	𐩶; 𐩶; 𐩶
200	𐩷		𐩷	𐩷	𐩷; 𐩷	𐩷; 𐩷; 𐩷
300	𐩸		𐩸	𐩸	𐩸; 𐩸	𐩸; 𐩸; 𐩸
600	𐩹			𐩹	𐩹; 𐩹; 𐩹	𐩹; 𐩹; 𐩹
800				𐩺	𐩺; 𐩺; 𐩺	𐩺
1000	𐩻		𐩻	𐩻	𐩻; 𐩻	𐩻
½	𐩼	𐩼	𐩼	𐩼	𐩼; 𐩼	𐩼; 𐩼; 𐩼

Source: Rilly (2007) with corrections from Hallof (2009).

𐩰 (REM 0356, 0559, 0561–0566, 0591, 1098, 1102, 1176). Griffith (1916a:23) proposed these signs to indicate units of measurement.

The other examples are rarely attested. There is a symbol in the shape of a bean 𐩰 in REM 1176, followed by the numeral 1 and preceding the “arrow point” and “corn,” which also include a number sign (Hainsworth 1982a:34, 43). This suggests either that these three signs represent a measuring unit and its subdivision or that they actually represent commodities, but in the latter case, it is curious that they were not accompanied by a different sign for their unit of measurement.

There is a single attestation of a unique sign 𐩰 followed by the numeral 2 in REM 1067/9 (Trigger & Heyler 1970:15,40, note 115). It may be a unit

of measurement of a complex number. It has some similarity with the sign for 2,000, and it seems suspect that there are neither signs for hundreds nor for dozens.

Finally, two signs have been attested in isolation on pottery recovered from Meroe: 𐩢 and 𐩣. Although they are listed as writing in the REM, they may as well be pottery marks.

III Linguistic Affiliation

Three principal methods have been used to progress toward the understanding of the Meroitic language.

First, there is the work on the philological details, which has been conducted at length by Griffith, and which allowed a decipherment of the script and the first advances toward our understanding of the language. It concerns the study of each inscription, its overall context (archaeological, iconographical, sociological), and its textual context (semantic, syntactic, paleographic). The hypotheses drawn from the study of a single text have to be confirmed with other texts. The results are often disappointing, but occasionally succeed in filling in unknown elements that shed some light on a passage of text. This approach is the most secure, but it is a slow, exasperating, time- and energy-consuming process with little gain. After the initial progress made by Griffith, it has proved particularly unrevealing in the decades that have followed. It requires a constant flow of new texts to feed the process.

The second method, the structural analysis, consists of a search of an entire corpus, rather than a case by case study, in which the possible arrangements and substitutions reveal rules of syntax. As confirmed by Hintze, the main proponent of this method, it does not achieve a better understanding of the text, but it prepares the way for applying the other two methods. Unfortunately, this method has many problems as well. It needs to compare passages that are relatively similar, and these are not found in great numbers except in the epitaphs. These texts, which seem the most stereotypical and the best studied in the Meroitic corpus, are as a consequence also the ones that can give us little extra understanding of the Meroitic language. The application of this method has delivered long lists of alternative “structures” that, otherwise, could be summarized in a few lines in a traditional grammar. Not the least of the objections is that it is not possible to separate grammar and semantics completely. That makes it unreasonable,

in the difficult circumstances of the current research on Meroitic, to search for precision in the former without the help of the latter.

The third approach is the royal road by which Rawlinson learned to understand Old Persian and then Babylonian, Hrožny the Hittite language, Sieg and Siegling the Tocharian language, Ventris and Chadwick the Mycenaean language: the comparative method. For this, one needs to find a clear idiom (or several) that shows phonetic correspondences with idioms of another language, after which the vocabulary and morphology of the two languages may in the end achieve a translation. It does not always include all these stages, and some may precede others. In the long run, this approach is the most effective. But in order to apply this method, it is still necessary to understand some words, either through the philological method or through bilingual texts. In addition, the related language should be well known. The languages mentioned previously that were studied in this way each presented its own difficulties. If few bilingual texts are available, and particularly if the language is isolated and has no known surviving relatives, the process becomes increasingly difficult or even impossible.

Today, the Meroitic language has a reasonable, although small, number of known words, and, if any related languages can be identified, it becomes possible to implement this third approach.

A. THE FIRST HYPOTHESES

Francis Llewellyn Griffith was the greatest philologist of his time and made the first contributions to our understanding of Meroitic family relationships. He explored two possibilities. The first was a relation between Meroitic and Beja, a Cushitic language spoken by nomads near the Red Sea. The grammatical characteristics, in particular the absence of gender and the agglutinative nature of the language, made him disqualify this hypothesis. He also considered Meroitic to be a parent language of Nubian, a name for a group of languages found from Aswan in the north to Dongola in the south along the Nile River as well as in the west of Sudan. Griffith in 1911 and 1912 then presented three groups of words, those borrowed from Egyptian, those comparable to Nubian, and those without any clear relationship.

The latter group had words, such as “big,” “good,” “spouse,” “to give birth,” that were considered the most stable in the history of languages according to other historical linguists. Griffith was struck by the notable difference between these words and those of Old Nubian. Also, the morphology appeared different. Meroitic has no grammatical gender and uses suffixes in a structure that is called agglutinative. In addition, it uses postpositions. For instance, the genitive is a postposition and marked by a suffix *-se*, where Nubian has a

genitive in anteposition, followed by a connective *-n*. In Griffith's time there was no analysis of the pronouns or the verbal morphology.

Nevertheless, Griffith continued his studies of Old Nubian, which had just been deciphered in 1906 by Schäfer and Schmidt. But in 1916 he published two articles, and one of them stated (Griffith 1916b) that the lexical resemblances between the two languages, Old Nubian and Meroitic, were probably due to loans and that Meroitic was not the ancestor of Nubian. Subsequently, the immediate successors of Griffith turned their attention away from Nubian and focused on languages from the Horn of Africa, known as Cushitic (formerly Hamitic), that are part of the large language family known as Afro-Asiatic (formerly Hamito-Semitic).

The theories that followed presented a range of possibilities but also suffered from many methodological problems (see Rilly 2010:27–31). A focus on one or two grammatical aspects of Meroitic has placed it close to various Afro-Asiatic languages that share those characteristics. But those comparisons are not sufficient for any conclusion and may even be regional features rather than evidence of a shared ancestry. The same is true for a comparison of phonology, since the use of the same sounds in the language is not necessarily proof of a historical linguistic relationship. Word lists that have been used for comparison often contained items that were or still are little understood or were otherwise inaccurate or contained too few words to arrive at a convincing conclusion. Without dismissing all the work that has been done on this topic in the past century, there is no other solution than to study precise correspondences of both the vocabulary and the morphology of Meroitic and its proposed related languages before reaching a conclusion.

B. THE NILO-SAHARAN HYPOTHESIS

In 1963 Joseph Greenberg published *Languages of Africa*, in which he proposed to group the African languages into four great families or “phyla”: Afro-Asiatic (earlier known as Hamito-Semitic, a term still used in French), Niger-Kordofanian, Khoisan, and Nilo-Saharan. This last group, undoubtedly one of the least known of the four, has about a hundred languages that are located from the mouth of the Niger River up to Ethiopia and Kenya. This phylum has various families, of which the most established and numerous is Eastern Sudanic, which contains Nubian languages, the Nilotic languages (Dinka, Shilluk, Masai, etc.), and even some small isolated languages such as Nara in Ethiopia.

After the preceding publication, Bruce G. Trigger (1964) advanced the suggestion that Meroitic was part of the Eastern Sudanic Group. In his study

he made various lexical comparisons. Based on a somewhat different set of lexical items, Marvin Lionel Bender (1991) eventually disagreed with Trigger and concluded that Meroitic could not be Nilo-Saharan.

As with the earlier suggestions on the relationship of Meroitic with other languages, Griffith, and now Trigger and Bender, used a basic vocabulary that was unsatisfactory. One of the principal dangers is the inferred translation. One advances the meaning of an unknown Meroitic word by using a Nubian word with a similar appearance, and subsequently this word is used to demonstrate the relationship between Meroitic and Nubian. A number of these words can be found in Griffith's work, and Bender has added some of his own. Other glosses are simply incorrect, in particular, the ones taken from Zyhlarz, which were used by Trigger and in one article by Bender. Those words with little to no proof should also not be used. Bender made a number of transcription errors that obfuscate the picture as well. All in all, there remain only eleven morphemes and thirteen lexemes that are reliable in the lists used by Trigger and Bender. This corpus is insufficient to prove any relationship. Closely related languages do not necessarily have all these terms in common, and, analogously, it would allow too many possible relationships even with languages that are certainly not related.

In 1989, Hintze summarized his conclusions, as a follow-up of his 1971 article, and showed structural resemblances between Old Nubian and Meroitic. Both languages have no grammatical gender, are of the SOV type (a dominant word order of subject, object, and verb), have an adjective follow the noun, and make use of postpositions. Their phonological inventory is limited, and there are frequent assimilations. But Hintze stressed each time that these characteristics do not necessarily indicate that they share the same ancestor. They can be found in many unrelated languages, such as Sumerian. He also mentioned some morphemes used in both Meroitic and Old Nubian. Finally, he reiterated the observations that he made after his lexical comparison in 1971: that the evidence is too thin for any conclusion and that a comparison is to be made with proto-Eastern Sudanic rather than with a single language. At that time, there was no publication available with reconstructed languages for either Nilo-Saharan or Eastern Sudanic.

C. THE NILO-SAHARAN LANGUAGES

Nilo-Saharan, unlike Afro-Asiatic and Bantu, is a relatively young topic in African linguistics. Even if one goes back to Reinisch (*Die Nuba-Sprache*, 1879) and Lepsius (*Nubische Grammatik*, 1880), research on Nubian, the main part of the Nilo-Saharan languages, has only been conducted recently. One of the first studies was on Gaam in 1980, and one of the first dictionaries

on Ik dates to 1999. Many languages are not known apart from brief inquiries and are at some risk to become extinct unless the time is taken to describe them. The first comparative dictionaries, which can be used for historical reconstruction, date only to 1996 (Bender) and 2001 (Ehret).

Although today the classification by Greenberg is well accepted, uncertainty remains about the validity of the Nilo-Saharan phylum in his classification. It concerns a remnant of a family that groups together the languages in the east of the Sahel and that have not been linked to the Bantu languages in the south or to the Afro-Asiatic languages in the north, east, and west. The process by which Greenberg created this phylum is equally telling. In a first study in 1955, Greenberg distinguished sixteen families in Africa. The phylum Afro-Asiatic was already there, just as Khoisan was. The future Niger-Kordofanian was still divided into two groups: Niger-Congo and Kordofanian. Nilo-Saharan, which appeared for the first time in his synthesis of 1963, *Languages of Africa*, is a fusion of twelve remaining families, some represented by one isolated language only (e.g., Fur, Kunama, Berta). The difficulty of creating the Nilo-Saharan family is not reason enough to doubt its validity, but its linguistic diversity is not found in any of the other phyla.

Several languages that were grouped together are only vaguely attached to the phylum. The Saharan branch shows some particularities that question its attachment to Nilo-Saharan, and some even suggest an Afro-Asiatic link (Bender 1996:60). Several specialists of central Sudanic languages, among which the similarities are clear, have trouble finding a relation with the rest of the Nilo-Saharan family. Within the phylum, different groupings are used depending on the researcher.

The reasons for this uncertain situation are of several kinds. First, families such as Indo-European and Afro-Asiatic have been gradually uncovered, and their understanding is based on knowledge of ancient languages (closer to each other than to their descendants) such as Sanskrit, Greek, and Latin in the former and biblical Hebrew, classical Arabic, and Aramaic for the latter family. It was, therefore, possible to incorporate one by one many different language groups. In the case of Nilo-Saharan, this progression has been absent. Almost all of the languages of the phylum have been grouped together. Moreover, no ancient languages guided this process.

Second, perhaps because of its long history, the Nilo-Saharan phylum is heavily eroded. It is likely that proto-Nilo-Saharan, if it ever existed, was spoken long before proto-Indo-European. Most parts of the African Sahel have not experienced conservative factors such as sedentary lifestyles, state formation, and writing, as have been found for speakers of Indo-European and Semitic languages. In addition, the large majority of the Nilo-Saharan

languages count fewer than one hundred thousand speakers. The changes in the languages have been considerable as a consequence.

Eastern Sudanic has the greatest affinity with Meroitic, and this family is in fact the oldest recognized group within the Nilo-Saharan phylum. Also, and this is not by accident, this group has been most studied since at least the seventeenth century. It is the only group with a known ancient language, Old Nubian, spoken in the medieval Christian kingdoms of Sudan and attested in written form since the eighth century AD. The other branches of Nilo-Saharan will not necessarily be excluded in the analysis here, but the selective use of examples from isolated cases and from different branches will be avoided.

The principal language groups that have been used for comparison are summarized in [Figure 3.1](#). A brief mention of each language now follows with particular attention to the North Eastern Sudanic languages that are closest to Meroitic.

It is noted that there is often more than one name for a language. Also, the orthography may vary and the names may change over time for a variety of reasons that often confuse the linguist who is looking for appropriate references. A number of these variants are listed here to facilitate comparison.

The numbers of speakers that are listed largely follow Bender (2000) unless stated otherwise. But considering the political situation in Darfur and Bahr el-Ghazal in Sudan, it is not likely that all of the languages in this region survived.

1. Songhay (Songhai, Songay, Sonjay)

This collection of dialects at the mouth of the Niger River is spoken in Niger and Mali. There are six main varieties of the language. Three of them are the main dialects spoken in the east around Timbuktu and in the central and west around Gao by a total of 1.1 million speakers. The Zerma in Niger have 2 million speakers, the Dendi in Niger 72,000, and the Tadaksahak in Mali an additional 42,000. The other dialects are spoken in the north in various enclaves among the Touareg.

The classification of Songhay as part of Nilo-Saharan is still contested, with language contact and creolization at the basis of the arguments. As a precaution, Songhay will not be included in the comparison with Meroitic.

2. Saharan

The Saharan Group consists of four main languages. Kanuri or Kanembu is spoken east of Lake Chad (Nigeria-Chad) by 4.1 million speakers. Dazza or

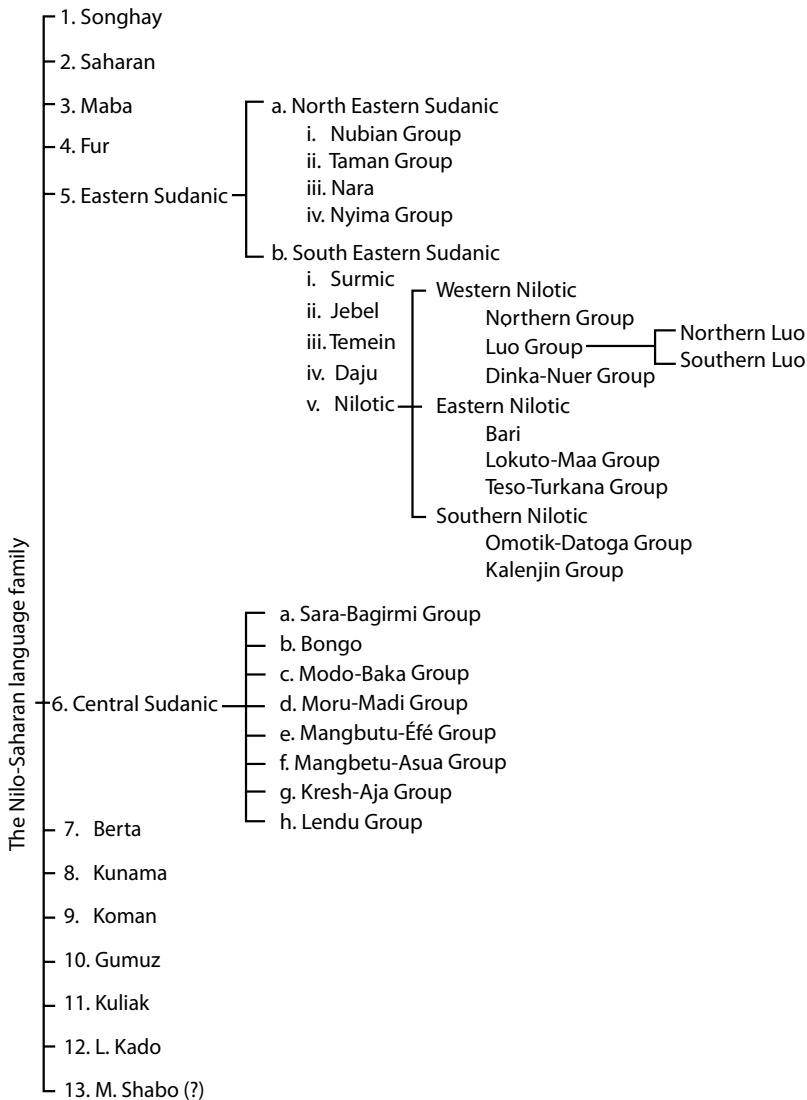


Figure 3.1: The Nilo-Saharan language family

Teda (also Tuda or Tubu) is a group of dialects spoken in Chad by 370,000 people. Zaghawa (also Beri, Bideyat, or Bidiya) is a group of dialects that is spoken by a number of groups that have entered Chad from Darfur, Sudan. It has 182,000 speakers. Finally, Berti is a language spoken in the mountains of Tagabo in Darfur but is considered extinct and linguistically very close to Zaghawa.

3. Maba

Five languages belong to this group that is named after Maba or Bura-Mabang, the principal language of Ouadai (also Ouaddaï), eastern Chad, spoken by 300,000 people. Karanga is a group of dialects also spoken in Ouadai, south of Abéché, for which there is no demographic information. Masalit has 250,000 speakers and is a group of dialects spoken at the border of Sudan and Chad. Aiki-Runga-Kibet is a group of languages, since some are not mutually intelligible, spoken in eastern Chad by 43,000 people with other variants called Dagal and Muro. Finally, Mimi is a dialect group in the district of Biltine in Ouadai with 5,000 speakers, divided into two dialects named after their respective linguists: Mimi of Nachtigal and Mimi of Godefroy-Demombynes. A third language named Mimi is part of the Fur family.

4. Fur (or For, Called “Kondjara” in the North)

This principal language of Darfur in western Sudan is spoken by 502,000 people. On each side of the border between Sudan and Chad, one can find Amdang, a variety of the Fur language, also known as Mimi and spoken by 15,000 people.

5. Eastern Sudanic

This family was one of the first distinguished by Greenberg (1950) and was later split into two groups by Bender (2000), who named them Groups Ek and En. His subgrouping is followed here with our suggestion to rename them, following one of Bender’s earlier suggestions (1991:4), as North Eastern Sudanic and South Eastern Sudanic, respectively. A detailed description of North Eastern Sudanic languages is given here because of their central position in the study of the linguistic affiliation of Meroitic (see [Figure 3.2](#) and [Map 2](#)).

a. North Eastern Sudanic

i. Nubian Group

The languages and dialects of Nubian have lost much territory to Arabic but still cover much of the area that ranges from Aswan in the north to central Kordofan in the south, and from Darfur in the west to the Nile in the east. At present five languages that have nearly 900,000 speakers are distinguished.

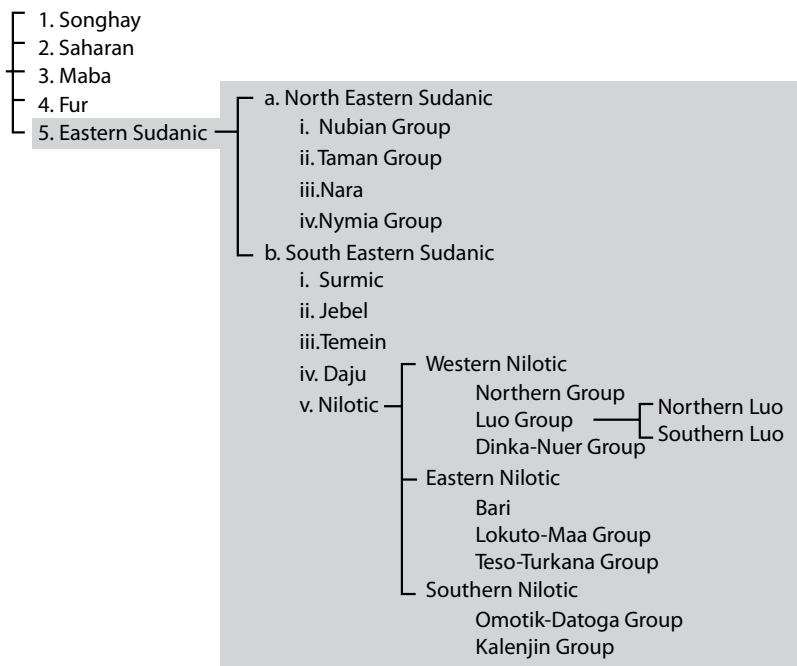
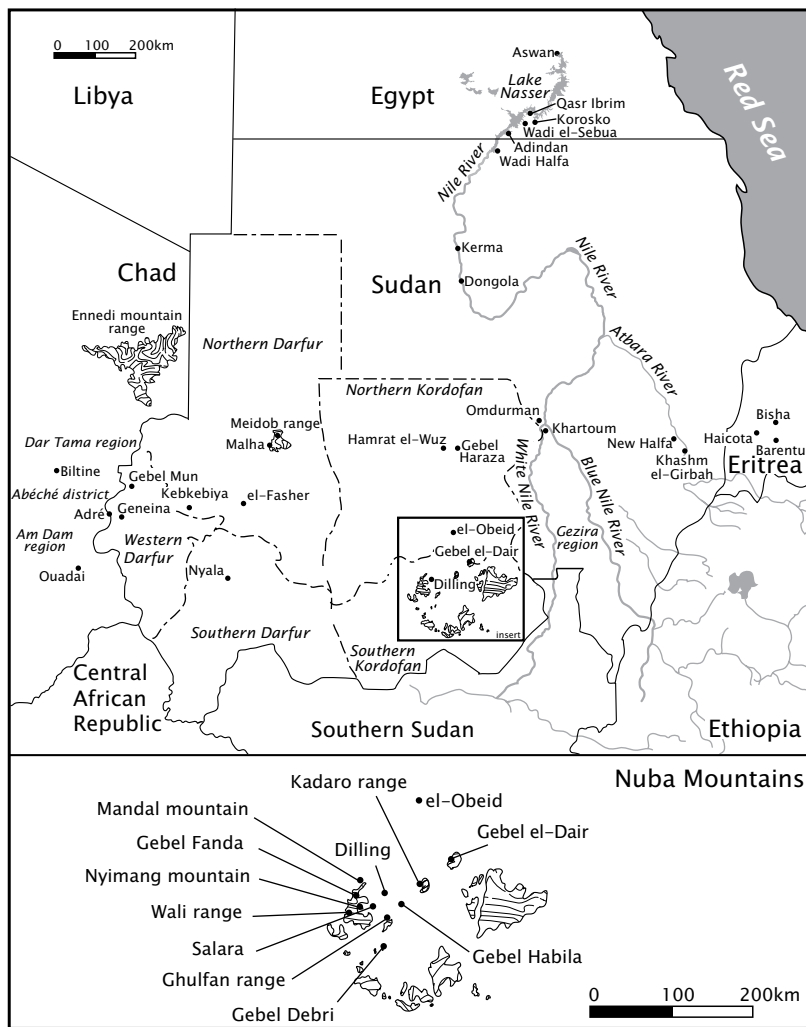


Figure 3.2: The Eastern Sudanic language group

Kenuzi-Dongolawi has two dialects. Kenuzi (also Kenzi, Kunuz, Kunuzi, or language of the Kunuz Nubians) was originally spoken in Egypt along the Nile between Aswan and Wadi el-Sebug. It had about 100,000 speakers. In 1960, when the Aswan Dam was completed, most of this territory was submerged into Lake Nasser. The Kunuz were given the choice to migrate to Cairo, where many had had longtime connections, or to the region of Kom Ombo, north of Aswan, where a new and smaller Nubia was created. The other dialect, Dongolawi, is spoken by 108,000 Danagla Nubians in Sudan and along the Nile, between Kerma and the namesake town of Dongola. The distance that separates the Kunuz from the Danagla and the Nobiin language that is found between their respective regions has raised various hypotheses concerning their history. Millet thought, for example, that the later arrival of the Nobiin speakers on the banks of the Nile, at the end of antiquity, had split the community that was in place. However, it seems that the Nobiin preceded the Kenuzi-Dongolawi in the Nile valley. Furthermore, the narrow proximity of the Kenuzi and the Dongolawi dialects indicates that the separation was not ancient. Thelwall and Adams are in agreement with the opinion of Fernea (1979), who states that at the end of the fourteenth century the ancient king of Dongola, Kanz el-Dawla (of mixed Arab



Map 2: The geography of the Eastern Sudanic languages

and Danagla ancestry), retired to an area near Aswan after his deposition. A diverse entourage of aristocracy accompanied him and spread their language in the region. “Kunuz” is derived from the name *Kanz*. This theory, also supported by the Arab historian Ibn Khaldun, seems by far the most credible.

Nobiin refers to a group of 545,000 speakers from different areas. Two hundred thousand are in Egypt, 295,000 in Sudan, and 50,000 are exiled in other countries. It is also called Mahas-Fadidja. It was suggested by Hohenwart-Gerlachstein (1979:17) that Fadidja had a distinct dialect in

Egyptian territory between Adindan and Korosko that was separated from the Kenuzi by an Arabic-speaking zone between Korosko and Wadi es-Sebua. Research by Bell (1975) and Werner (1987) proved that this partition did not exist and that, if it was not a language perfectly identical across the region from the Dongolawi zone in the south to the Kenuzi in the north, it had no differences that would warrant a different name. “Nobiin” is, therefore, used to indicate the language for the entire region. The speakers of Nobiin, in addition to the Fadidja of Egypt, include people in Sudan, from north to south: the Halfawin, the Sukkot, and the Mahasin, this latter term previously being used for the group as a whole.

The flooding that engulfed the lands of the Kunuz also affected the north of Sudan. Up to Wadi Halfa, the Sudanese portion of the Nile valley is submerged by Lake Nubia, as they call it on that side of the border. Not far from the Eritrean border, on the banks of the Khashm el-Girbah, a new town, New Halfa, was built to relocate the unlucky Mahasin.

The Nubians of the Nile valley – the Kunuz, Danagla, and Mahasin – were traditionally called “Barabra” in opposition to the Nubians of Darfur and Kordofan.

Midob or Tídn-aàl (language of the Tíd) is spoken in Darfur, in the west of Sudan. Its region features the Midob (or Meidob) mountains and almost 30,000 speakers (50,000 at the time of Werner’s study in 1993) who have given themselves the name *Tíd* (or singular *Tìdi*). They are mostly cattle farmers. Their principal center is Malha. Some of them have since migrated to the town of Omdurman near Khartoum or to the Gezira, a rich agricultural triangle between the White and Blue Niles. The Midob have two main dialects: Urrti, the only one that has been described, and Shalkota. There is perhaps a third dialect known as Torti. These dialects are mutually intelligible. The Midob claim to have migrated from the Nile, as far as Arabia, all prestigious origins, but it seems that their birthplace is not much different from that of other Nubians as a result of the resemblance of the dialects from Darfur to the north of Kordofan.

In the past, Birgid (or Birked) was spoken by the Murgi, who could be found in Darfur, east of the route connecting el-Fasher and Nyala. This language was thought to have disappeared around the middle of the twentieth century until Thelwall, in 1969, collected a word list from an elderly Murgi in Darfur (Thelwall 1978:268). In 2003, Helen Fatima Idris recorded a list of one hundred words from an informant thought to be ninety years old and living in the village of Karamje, northeast of Nyala. Other Murgi are thought to live farther south toward Nyala and in Kordofan, south of el-Obeid (MacMichael 1918:48), but it is unclear whether they retained their language. Birgid is close to the Nubian speakers of the Nuba Mountains to

the extent that it was suggested to be one of their dialects (Zyhlarz 1928). The lexicostatistical work of Thelwall (1978) and Bechhaus-Gerst (1984) has shown that this language does not fit the Nuba Mountain dialects in terms of lexical proximity. The two scholars slightly differ in their positions. Thelwall considers Birgid and Kordofan Nubian as two groups inside the Nubian family (Thelwall-Schadeberg 1983:223), while Bechhaus-Gerst (1984:17) sees them as two independent branches. The first suggestion has proven more likely in the light of language reconstruction (see Rilly 2010).

Kordofan Nubian or Hill Nubian (in German: Bergnubisch) consists of a group of dialects spoken on a curve along the northern Nuba Mountains with 60,000 speakers, according to Stevenson (1984). This mountain area of 75,000 square kilometers in the heart of Sudan has attracted several populations and has a diverse collection of refugees so that it has become a rich area for African linguists. There are dozens of languages, which are from two separate phyla: Niger-Kordofanian and Nilo-Saharan. The main migration of Nubians to these mountains has been relatively recent. Their present location does not appear until the beginning of the eighteenth century; previously these people lived farther north in Kordofan (Stevenson 1984:38–39). The close proximity of their dialects confirms their recent separation. Their arrival was due to the invasion of Arab populations such as the Baggara in the west and north as well as the Kawahla and Kinana in the east. Although they appear late in this region, it seems that their presence still warrants the name “Mountain Nuba” or “Hill Nuba,” probably a name given to them by the Arabs. The term “Nuba” has been generalized to include all the people who live in these mountains. However, the Nubians of Kordofan, who – despite their scattered presence – have guarded their ethnolinguistic conscience, call themselves “Ajang” and their language *ajaj we* “the Ajang language.” From north to south and from east to west, the principal dialects of Kordofan Nubian, often named after the hills where their speakers live, are as follows:

Dair (or Thaminyi) has about 1,000 speakers who occupy the Gebel el-Dair, an isolated escarpment toward the northeast of the Nuba Mountains.

Tagle (or Taglena, Kororo, Kururu) is spoken by an unknown number of people on Gebel Kururu in the mountain ranges of Kadaru.

Kadaru (or Kadero, Kadaru, Kodoro, Kodhin, Kodhinniai) has 6,000 speakers.

Koldegi, undoubtedly a variant of Kodoro, is spoken south of the Kodoro mountain range, but there is nothing available on the number of speakers.

Dabatna (or Kaalu) has an unknown number of speakers on Gebel Dabatna, southwest of the Kadoro range.

Habila is spoken on Gebel Habila, an isolated hill between Dilling and the Kadoro range. The number of speakers is unknown.

Ghulfan (or Gulfan, Wunci, Wuncimbe) is found on the Ghulfan mountain range with about 16,000 speakers. Jakobi (2001) distinguishes two variants: Ghulfan-Kurgul in the east and Ghulfan-Morung in the west.

Debri (or Wei) is spoken on Gebel Debri, south of the Ghulfan range, by about 1,000 people (Stevenson 1984:27)

Kudur (or Kwashi) is spoken by an unknown number of people on Gebel Kudur, an isolated hill north of Dilling.

Dilling (or Deleny, Deleñ, Warki) has about 5,300 speakers who live in the town of Dilling and its neighborhoods.

Kasha (or Kenimbe) is spoken by an unknown number of people on Gebel Kasha, an isolated hill north of the Karko range.

Karko (or Garko, Kargo, Kithonirishe) is spoken on the Karko mountain range, west of Dilling, by about 13,000 people. One variety is called Dulman, and the other, spoken farther west, is Kundukur and called “Kundugr” by Hess (1919–1920).

Fanda speakers are found on Gebel Fanda, south of the Karko range; their number is unknown.

Kujurua (or Kanak) is spoken on the Kunit or Kujurua hill, southwest of the Karko range, but with an indeterminate number of speakers.

Wali (or Walari, Walarishe) has about 1,000 speakers and is found in the Wali mountain range, southwest of Dilling.

Tabag is spoken on Gebel Tabag, an isolated hill west of the Nuba Mountains with an unidentified number of speakers.

Abu-Jinuk is spoken by an unknown number of people on Gebel Abu Jinuk, another isolated hill west of the Nuba Mountains.

El-Hugeirat has about 1,000 speakers who live in the far western part of the Nuba Mountains.

Two extinct languages must be added to this list of Nubian speakers, one from medieval times and one that disappeared more recently. Old Nubian was the literary language of the Christian Kingdom of Nobadia, which became a province of the Kingdom of Makuria in the seventh century. It was written with the help of the Coptic alphabet but completed with two or three signs adapted from the Meroitic syllabary. The literature in Old Nubian is mostly religious in nature, of which the best-known texts are the Menas Legend, the Nicene Canons, the Stauros Text, and the

Lectionary (a collection of New Testament readings for church services). With the excavation of Qasr Ibrim, some profane documents were added as well as fragments of the Pseudo-Chrysostom. The oldest known traces that can be dated are glosses for a Greek epitaph from the year AD 797. However, it is likely that the development of the Old Nubian script followed Christianization to some extent in the middle of the sixth century, as the use of some Meroitic signs suggests. The most recent text, a piece of parchment in name of King Joel of Dotawo, dates to AD 1484. With Islamization, Nubian became a purely oral language once more and the script fell into disuse. It was not rediscovered and deciphered until the beginning of the twentieth century (Schäfer & Schmidt 1906). The work of Griffith, followed by Zyhlarz and more recently Browne, who is author of a grammar and a dictionary (Browne 1996, 2002), allows a good description of this language despite the limited corpus of texts.

Since its rediscovery, Old Nubian has been considered the direct ancestor of Nobiin, the Nubian language in the north of Sudan. It is true that nearly all of the known body of texts were generated in the northern region, the ancient Kingdom of Nobadia. Recent finds by the Polish mission in Banganarti show that Old Dongolawi had also been written. However, with the annexation of Nobadia, the specific vocabulary of Dongolawi slowly penetrated the written language to the point that it became a *koiné* language – a merger of two languages into one. From a corpus of 165 Old Nubian words that are still in use today, 129 are found in Kenuzi-Dongolawi, of which 22 are specific to this language. A further 143 are found in Nobiin, with 36 language-specific words. Although there are fewer Dongolawi words, it is no longer possible to consider Old Nubian as the exclusive ancestor of Nobiin.

Another extinct language, this time without offspring, is Haraza. On the heights of Gebel Haraza, located in the north of Kordofan, close to the town of Hamrat el-Wuz, three hundred kilometers west of Khartoum and two hundred kilometers north of el-Obeid, there remained until the end of the nineteenth century an original Nubian language. It was first mentioned by Newbold (1924) at a time when there were still some speakers of the language. It is only known by a list of thirty-six words, written by a local man who was literate in Arabic. He introduced, as a consequence of using Arabic script, certain imprecise renderings of the vowels. During his fieldwork, Bell (1975) succeeded in confirming some rare terms about fifty years later, despite the Arabization that was almost complete in the community that remained. Although it is difficult to work with such a limited corpus, Haraza may be very close to Kordofan Nubian, with which it may be immediately connected. It even underwent the same phonetic changes. In

contrast, it did not take on a certain number of lexical innovations that are specific to Kordofan Nubian. Historically, this small glossary confirms that there existed a continuum of Nubian dialects between the east of Kordofan and the Nile.

ii. Taman Group

This group of dialects finds itself in a particularly poorly understood and described linguistic territory. In fact, not a single grammar or dictionary has been published and the available sources are limited to thin articles in general journals. Two detailed studies of Tama are under way, one by R. P. Pierre Palayer, on the speakers residing in Chad, and one by Gerrit J. Dimmendaal, on speakers who migrated to Sudan. To this day they have not published their work, but they have generously made part of it available for this study.

The Taman languages are found mainly in the region of Ouadai, in Chad, near the Sudanese border, in the districts of Biltine and Abéché. One portion of the speakers, in particular those speaking the Tama and Mararit dialects, is found in or near Sudan, particularly Darfur. This territory is surrounded by a region of Fur and Maba speakers, and it is not uncommon for the Taman speakers to use those languages together with the Chad variety of Arabic. Indeed, the Taman dialects have numerous loanwords from both Maba and Arabic.

The most recent and most complete study of the Taman dialectology is by John Edgar (1991). He rendered the earlier classifications, which often used secondhand sources, largely obsolete, and his findings are agreed with here. It is further noted that he excludes Kibet, a language that was regrouped to the Maba Group after a convincing study of Nougayrol. According to Edgar, there are two languages in the Taman Group, each with three dialects, and one intermediate dialect that cannot be linked to either of these languages without more precise descriptions.

The Tama languages feature the Tama dialect, which is spoken by sixty-three thousand people, mostly in Chad in the Dar Tama, a mountainous region of ten thousand square kilometers. Its area of distribution extends to the village of Kebkebiya near Sudan. The Tama dialect has itself two near-identical varieties, one spoken in the north and center of this zone, the other in the south. Two other dialects may be considered a subgroup of the Tama language. Erenga (or Ereṅa) is found in Darfur, north and east of the town of Geneina. It has about seventy-five hundred speakers, according to Bender (1996). It shares a cognate lexicon with the Tama dialect that varies in the literature between 78 percent (Doornbos & Bender 1983:68)

and 94 percent (Edgar 1991). Sungor (or Asungori) is spoken on the Chad side of the border, south of the town of Biltine and north of the town of Adré, with an important extension into Sudan. According to Bender (1996) it has thirty-eight thousand five hundred speakers. The cognate lexicon with Tama was estimated by Edgar (1991) at 91 percent, while no figures were given by Doornbos and Bender (1983).

The Mararit language also consists of three dialects. The Mararit dialect proper (also Maraarit, Merarit, Mararet, Ibiri, Abiri, Abiyi, Ebiri; the last four are names similar to the term used by the speakers themselves) is spoken in the Am Dam district of Chad, between the Tama dialect in the north and the Sungor in the south. Some speakers are found along the Sudanese part. The Mararit have a lexicon that is 53 percent (Doornbos & Bender 1983) or 82 percent (Edgar 1991) cognate with the Tama dialect. The Abu Sharib dialect, the second of the Mararit dialects, is found to the west of the Mararit, below the town of Biltine. There is no documented lexical similarity because of the limited knowledge of its lexicon, but it is sufficiently close to the Mararit dialect to make them easily mutually intelligible. The third and last dialect is known as Darnut, only mentioned by Edgar, and about which no geographical description exists. The number of people who speak each of these dialects depends much on the source that is used. When limiting the sources to Bender (2000), they make a total of forty-two thousand five hundred.

The Miisiirrii (or Mileri, Jabal) are mainly found in Darfur, at Gebel Mun, and have a few speakers on the Chad side of the border. The dialect is spoken by about six thousand people according to the dated numbers of Tucker and Bryan (1956). According to Edgar, 82 percent of their lexicon is cognate with the Tama dialect and 77 percent with the Mararit. In comparison, Doornbos and Bender suggest 53 percent and 52 percent, respectively.

There is little knowledge about the history of the Tama Group and none about its earliest history. The history is mostly conjecture based on the desire for a prestigious past. It extends from Yemenite and Tunisian backgrounds to a link with the Daju, mostly due to the background of the sultans who ruled the area. The proximity of the lexicons suggests a relatively recent divergence, probably not more than a few centuries. Nevertheless it is possible that loanwords, as in the Nubian Group, amplify the count of cognate words. The morphological differences indicate a clearer opposition between the two dialect groups, Tama and Mararit (cf. Edgar 1991:119–124). One may assume that proto-Taman was, for one or two millennia, the language of a population that possibly lived in Darfur, Sudan. Its linguistic relation with Nubian is often striking, but many of the resemblances are irrefutably due to the influence of the ancient language of Tounjour, a

people who migrated from the Kingdom of Makuria and dominated Ouadai and Darfur at the end of the Middle Ages and who similarly introduced a cultural vocabulary of Nile Nubian to the Midob.

iii. *Nara*

Nara is a language further removed from the group of North Eastern Sudanic languages in geographic terms. It is spoken in the western part of southern Eritrea (north of the town of Barentu) by forty-five thousand to fifty thousand speakers, all of whom are Muslim, according to the official data provided by the Eritrean Ministry of Education.

Partly because of the region's isolation, there have been only four original studies published so far, not counting Reinisch's study from 1874 that was based on material from Werner Munzinger in 1861 and 1862. Bender (1968) presented a list of two hundred words, and Thompson (1976) gave a summary of its grammar. Two brief articles on the phonology and tonology of Nara were published by Hayward (2000) and Abushush and Hayward (2002), respectively. In 2006, a new study was conducted by Claude Rilly; its results are used here.

The name of the language presents a problem. In older works, it is known as Barea or Barya. Reinisch's book from 1879 is called *Die Barea-Sprache* and Bender's article from 1968 speaks of Barya. It has been frequently mentioned that this is a pejorative term with an Amharic origin and with the meaning of "slave." But the story is more complicated. The name for this people, "Barea," was borrowed from the politically dominant Geez language and changed into *barya*; it was afterward transmitted to Amharic and Tigrinya and indicates "black" or "slave." The term appears in the history of the sons of Noah in the Kebra Nagast to denote Ham. Ham was Noah's black son, who became enslaved after having condoned the nudity of his drunken father, contrary to his brothers, Sem and Japhet, who covered their father with a robe. This well-known story has been used in history to defend the enslavement of black people, and the term *barya* was subsequently used to describe the entire black population of Ethiopia and Eritrea.

Nara, sometimes mistakenly transcribed as "Nera," is a term, according to Reinisch, that refers to one of its principal tribes, the Hikir. It does not have the complex connotation of the earlier name. It is homonymous with the word for "heaven" so that often the translation "language of heaven" is found. The Nara language translates as *Nara bana* in the language itself.

Nara is divided into four dialects: Hikir and Mogoreeb correspond to the names for two principal tribes, while Saantoorta and Koyta are two

minor varieties. Higur (or Hagar in the work of Reinisch) is spoken just north of Barentu, and this dialect has been chosen as the literacy norm by the Nara Panel of the Eritrean Education Ministry. Mogoreeb is found farther west, from the border of Haicota to the village of Bisha. Saantoorta is found west of Barentu and Koyta is northwest of this town. Only Higur has so far been described. The other varieties of Nara have not yet been objects of a published study. The four dialects are diverse, both lexically and grammatically, and their mutual intelligibility, if at all present, is difficult. One may suggest that there are two groups of dialects, one eastern group with Higur and Koyta, and one western group with Mogoreeb and Saantoorta.

The historical situation of the Nara language is unclear, as is the case for many of the North Eastern Sudanic languages. They are apparently mentioned for the first time in Greek and in Geez on a stele dating to AD 350 of the Axumite King Ezana, the first Christian king of Ethiopia, who is traditionally credited with the fall of the Meroitic empire. The Nara are mentioned in vocalized Geez as *Bāryā* and in Greek by the transcription of Βαρεωται. After the geographic and ethnic indications that accompany these words, there is no doubt they lived in the region close to the one they occupy today. They were tributaries to the Kingdom of Axum and were part of a sedentary people who asked for the aid of the Ethiopian sovereign whenever they were attacked by the Noba. Later, Ibn Hawqal, an Arab geographer of the second half of the tenth century, mentions them in the company of the Kunama within the Kingdom of Alodia (Alwa), the southernmost of the medieval Christian states in Sudan. At this time, Alodia and that which remained of the Axumite empire had a border in common that is not far from Kassala, 150 kilometers from Barentu. At the end of the Middle Ages, the Arab historian Al-Maqrīzī (1364–1442) mentions the Baraya people near Hamasen, close to Asmara. According to these two accounts, their territory was much more extensive than it is today.

The history of the Nara speakers on Eritrean soil has inspired some authors to claim that they are the ancient inhabitants of northern Eritrea (cf. Thompson 1976:598). According to their own tradition, they were from Keren, 150 kilometers northeast of Barentu, in Bilin territory, but this claim is not supported by other historical information. The proximity of Nara to other North Eastern Sudanic languages seems to indicate that they resided in western Sudan for a significant period. Perhaps they were accompanied by the first migrations that established themselves in the Nile valley prior to the second millennium BC. They may have followed in the footsteps of the affluent Atbara all the way to Eritrea. The name *Atbara*, already attested in Eratosthenes in the third century BC as Ἀσταβόρας, has been interpreted as “the river of the Barya” with proto-Meroitic *asta- “river” later becoming

Meroitic *ato* “water” (as in At-bara). They have also been associated with the Megabares (Μεγάβαροι in Eratosthenes and Strabo, *Megabarri* in Pliny the Elder), but the latter are connected to the Blemmyes instead and the etymology remains problematic.

The archaeological evidence is interesting, but, as always with civilizations without writing, it does not indicate which language was spoken. Fattovich (1990) mentions two cultures with regard to the peopling of the Sudan-Eritrea frontier between 3000 and 1000 BC. The Gash Group and the Agordat Group were raising cattle in the region. Their pottery has similarities with the technique for pottery making as well as the decorations in the Kerma civilization and Group C in Lower Nubia. Perhaps these two cultures correspond to modern Kunama and Nara.

iv. Nyima Group

This linguistic group is the least documented in the North Eastern Sudanic family. Only Roland C. Stevenson conducted extensive studies when he passed through the Nuba Mountains in 1930 for the Missionary Society, either evangelizing the people or surveying the terrain. Nyima was only a study within others because of the exceptional linguistic diversity in the region. The archival manuscripts that Stevenson left and that are kept in Bayreuth contain a good number of unedited elements on Nyimang and Afitti. A major unpublished manuscript by Stevenson has a Nyimang grammar of 180 pages, entitled “Nyamang Grammar,” and is dated to 1938. A copy of this manuscript was obtained through the generosity of Gerrit Dimmendaal. A word list of 250 for Nyimang and Afitti was published by Bender in 2000.

The name “Nyima” for the group as a whole was composed by Bender, who used it from 1980 to distinguish the linguistic group from the Nyimang language. Nyimang is spoken in the north of the Nuba Mountains in Kordofan, Sudan. The speakers are divided in two groups that are geographically and linguistically different. The speakers of the first group, Nyimang proper, have given themselves the name Ama (*ámá*), that is, “human beings,” and this name is used to characterize their dialect within the Nyimang Group. They are located in the southwest of the town of Dilling at Nyimang Mountain, from which they received their name. Their principal town is Salara. The other villages, each corresponding to a mountain, are Tendia, Kelara, and Hajar al-Sultan, former residences of their kings, situated with Salara in the western part. The eastern part has the villages of Fos, Kakara, Kurmiti, and Nihil. There are seventy-four thousand five hundred people, who are primarily farmers.

They are well-known soldiers and take pride in education. Today Nyimang are found throughout Sudan, particularly in Khartoum in the neighborhoods of Sambrab and Umm Badda, where the language is still spoken and understood by the youth born there.

North of this zone there are the Mandal Mountains, from north to south: Sobei, Gebel Adlan, Joghuba, and Wulal. Here resides the second group, the Mandal, who named themselves *Mâlê*. The Mandal do not consider themselves Nyimang even though they speak a similar dialect and their tribal chiefs were vassals of the Nyimang king. Their tradition claims that they were formerly part of the Ajang (Nubians of Kordofan) and exchanged their earlier language for Nyimang. This cannot be confirmed with linguistic evidence as their dialect has no more loanwords from Kordofan Nubian than Nyimang. Although Mandal has some unique words for large fauna (elephant, lion, giraffe), these do not resemble any known words in the Nuba Mountains and certainly not Kordofan Nubian words.

Ama and Mandal are mutually intelligible. The morphological and syntactic differences are minimal. Only a small proportion of the vocabulary, primarily the nouns, is different. Mandal shows conservative tendencies, such as the preservation of an intervocalic /g/. Within each dialect there are local variations. They are more evident for Nyimang, where there is a contrast between eastern and western villages. The negative verbal marker, for example, is pronounced as *fá* in the west and *há* in the east.

The Afitti, the second branch of the Nyima Group, are found in the northeast of the Nuba Mountains, to the west of Gebel el-Dair, its second-highest mountain (1,387 meters). The mountain separates the Afitti and the Dair Nubians. Their name identifies the most important of the clans. The others are recorded as Unietti and Ditti, of which only the latter is still recognized today. The language is also called “Dinik” by Bender and others, but the word is not commonly used by the people themselves to identify their language. Their main towns are Kundukur, Shakaro, and Kitra, at the foot of Gebel el-Dair, and, in the northwest close to Gebel Dambeir, there are Dambeir and el-Hujeirat (de Voogt 2009). Afitti is spoken by approximately four thousand people and divided into two dialects, Ditti and Afitti. Ditti is mainly spoken in Kitra and seems more conservative in its lexicon, while the majority speak Afitti, whose speakers have increasingly borrowed from Arabic.

The differences between the two Nyima languages, separated by one hundred kilometers from each other, are considerable. Only 60 percent of the vocabulary is given as cognate (Thelwall & Schadeberg 1983:225). There is no mutual intelligibility at all. Their breakup may suggest that a continuum of Nyima languages existed north of the Nuba Mountains and

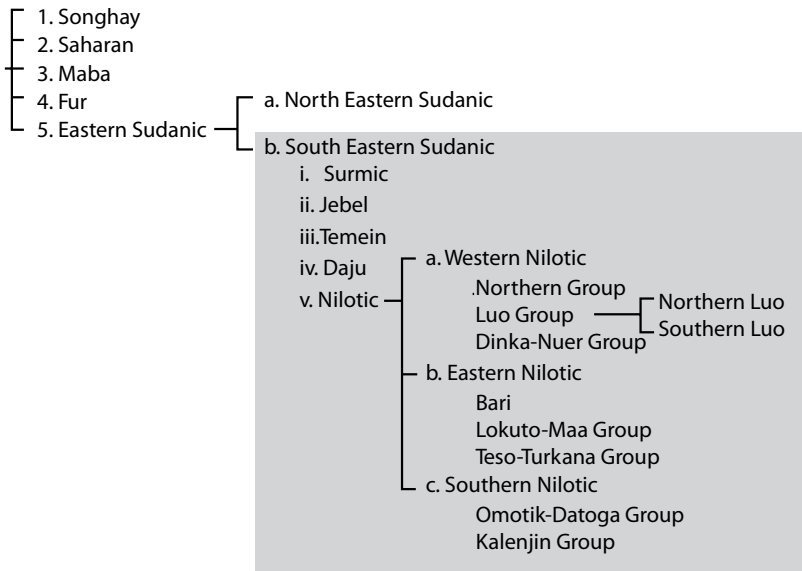


Figure 3.3: The South Eastern Sudanic language group

that they retreated to the defenses of the mountains with the onslaught of Arab forces. There are no historical sources to confirm this, however, and the Nyima, according to their traditions, always occupied their present locations. Their link with the North Eastern Sudanic family places them north of Kordofan and Darfur for their earliest history. They would then follow the same route as their Nubian cousins in the Nuba Mountains, perhaps with different stages and, without doubt, some centuries earlier.

b. South Eastern Sudanic

i. *Surmic*

The first of this family's five branches (see Figure 3.3) is composed of the Surmic (Didinga-Murle or Surma) languages, which are spoken on both sides of the Sudan-Ethiopian border:

Didinga-Longarim and Murle-Tennet are spoken in Sudan by 136,000 people. Baale-Zilmamu is found in Ethiopia and spoken by 7,500 speakers. Me'en or Mekan is also spoken in Ethiopia, in the Omo valley, by 50,000 speakers and has two known dialects: Bodi and Tishena. Mursi or Suri is found in Ethiopia with 36,000 speakers, and, finally, Majang or Mesengo is also found in Ethiopia and has 50,000 speakers.

ii. Jebel

This small group of languages in Sudan is found along the hills of the White Nile near the border with Eritrea. The main language is Gaam (Ingessana, Ingassana, or Tabi), spoken by 100,000 speakers in the Tabi or Ingessana mountains. Of its three dialects Kukur, Soda, and Bau, only the third has been described. Four other languages are found a little to the south with only 1,000 speakers each, namely, Aka (Shillok), Kelo (Tornasi), Molo (Malkan), and Beni Sheko.

iii. Temein

This group has three languages that are found in the Nuba Mountains in central Sudan. Temein (or Ronge) is spoken by 10,000 people while Keiga Jirru (or Doni) and Teisei (Tese or These) each have 1,000 speakers.

iv. Daju (or Dadjo)

This collection of eight dialects is found from the center of Chad up to Kordofan in Sudan with a total of 180,000 speakers. The dialects are known as Daju of Dar Dadjo (or Mongo), Daju of Dar Sila, Bego (Baygo, Baigo), Daju of Darfur (or Nyala), Daju of west Kordofan (or Lagowa), Shatt, Liguri, and Njalgulgulde (or Nyolge), of which the first two are found in Chad and the rest stretch from Darfur to the Nuba Mountains and Bahr el-Ghazal.

v. Nilotic

This subdivision of South Eastern Sudanic is the most important of the Nilo-Saharan phylum in terms of its number of speakers (14.4 million), its diversity of languages, and its geographic spread. It covers a large territory in the south of Sudan, Kenya, and Uganda, and its influence is found up to Ethiopia, Tanzania, and the Democratic Republic of Congo. It has three groups, Western, Eastern, and Southern, each with distinct subgroups.

WESTERN NILOTIC**NORTHERN GROUP**

Burun is spoken in southeast Sudan by 18,000 people. Mebaan is nearby with 37,500 speakers; Jumjum, also close to Burun, has the same number of speakers as Mebaan.

LUO GROUP

► *Northern Luo* Shilluk (Colo) in central Sudan is spoken by 175,000 people. Anywa (or Anuak) speakers are in the southernmost part of the Sudan-Ethiopia border with 78,000 people. Jur (Jur Luo) is spoken by 54,000 people around Waw in south Sudan. Bor is spoken south of Waw by 8,000 people.

► *Southern Luo* Acholi (Acoli) is spoken by 3 million people in Uganda including some speakers in the Democratic Republic of Congo. It has several dialects, including Acholi proper (774,000), Lango (978,000), Alur (920,000), and Dhopaluo, Labwor, and Nyakwai, for which no numbers are available.

Kumam has 113,000 speakers to the north of Kampala in Uganda. Adola (or Badama) is found on the border between Uganda and Kenya with 250,000 speakers. Luo of Kenya (Kavirondo Luo) has 3.4 million speakers and is found near the eastern and southern rivers of Lake Victoria.

DINKA-NUER GROUP

Dinka (or Jieng) is spoken in southern Sudan by 1.35 million people. It was the second largest language of the formerly united country of Sudan after Arabic. It has four main dialects, known as Padang, Bor, Agar, and Rek. Nuer (or Naadh) is geographically and linguistically closest to Dinka and spoken by 840,000 people divided into six main dialects: Tyang, Lou, Jinaky of the west, Jikany of the east, Nyuong, and Door. Finally, Atuot is found toward the south of Dinka, also in Sudan, and counts 25,000 speakers.

EASTERN NILOTIC**BARI**

Bari (or Pāri) is a group of dialects found on the banks of the Nile on both sides of the Sudan-Uganda border with 286,000 speakers. It has six main variations: Nyepu, Mondari, Pojulu, Nyangbara, Kuku, and Kakwa.

LOTUKO-MAA GROUP

Lotuko (Lotuxo) is a group of dialects found in southwest Sudan close to Uganda and has 135,000 speakers. Maa, also known as Masai (or Maasai), is one of the main languages of Kenya with 883,000 speakers and has various dialects that are found as far as Tanzania, where the best known is Samburu with 147,000 speakers. Ongamo (or Ngasa) originally spoken northeast of Kilimanjaro in Tanzania is currently considered extinct.

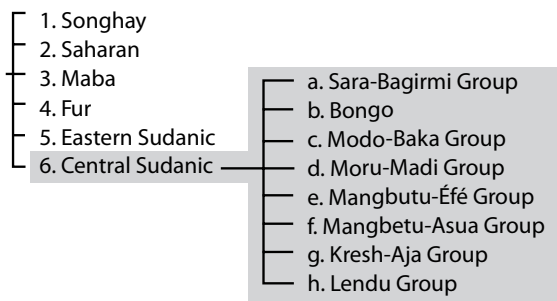


Figure 3.4: The Central Sudanic language group

TESO-TURKANA GROUP

Toposa has 100,000 speakers and is found south of the Sudan-Ethiopia border. Turkana is found in the northeast of Kenya up to Ethiopia and has 345,000 speakers. Karamojong (Karimojong, Akarimojong) is spoken in the north-east of Uganda by 370,000 speakers. Teso (or Ateso) is found in Kenya and Uganda, north of Lake Victoria; 1.27 million people speak this language.

SOUTHERN NILOTIC

OMOTIK-DATOOGA GROUP

Omotik, not to be confused with the Omotic family of languages in Ethiopia, is an extinct language that used to be found in west Kenya. Datooga (or Tatoga or Taturu) is a group of dialects spoken in the north of Tanzania by 175,000 people.

KALENJIN GROUP

This group of dialects in west Kenya, bordering Uganda and Tanzania, includes Nandi (262,000), Keiyo (111,000), Kipsigis (472,000), Tugen (144,000), Endo-Marakwet (47,500), Sogoo and Okiek (both extinct), Sapiny and Sebei (120,000 together), and Pokot or Päkot (234,000).

6. Central Sudanic

As in the case of the Nilotic Group, the Central Sudanic Group is a huge family of languages and even more diverse (see [Figure 3.4](#)). It is presumably an earlier split of the Nilo-Saharan phylum. These languages are spoken in pockets spread over a vast region that encompasses Sudan just north of the Democratic Republic of Congo to Chad and into the Central African Republic. Most of them do not have more than a few thousand speakers, while some, particularly in the southern part, have numbers that rival those

found in the Nilotic Group. Some are little known, and their connection is complex to the extent that their grouping should be used with caution. The following list largely follows that of Bender (1996, 2000), who was inspired by Greenberg (1963a), with some revisions based on the suggestions made by Pascal Boyeldieu.

a. Sara-Bagirmi Group

i. Subgroup Sara

Sara is a group of dialects in the south of Chad; its main members are Sar (Sara Majingai) spoken south of the village of Sarh by 200,000 people, Mbay with 100,000 speakers near Moissala, Bagirmi (or Barma) south of Njamena with 68,000 speakers, Kuka spoken to the west of Njamena by 77,000 people, and Kenga spoken by 30,000 people east of Lake Chad.

Sara-Ngambay is a group of dialects in the Moundou district, southern Chad. Ngambay has 600,000 speakers, Laka 57,000, and Kaba of Goré 158,000.

Doba consists of dialects found in southern Chad toward the border with the Central African Republic, consisting mostly of Doba itself spoken by 250,000 people, Bédjonde or Bediondo with 36,000 speakers, and Gulay with 163,000.

Kaba dialects are found in southern Chad and in the north of the Central African Republic, consisting mainly of Kaba Ndim (or Démé), Kba Na, and Mbanga, for which there are no available numbers.

Ruto-Vale dialects are also spoken across the Chad–Central African Republic border, east of Kaba of Goré. The main variety is known as Vale and spoken by 5,500 people.

Bagiro-Guru is a group of dialects in the south of the Central African Republic and in the north of the Democratic Republic of Congo consisting of Bagiro with 1,000 and Furu with 10,000 speakers.

Yulu consists of a number of dialects spoken along the Sudan–Central African Republic border with Yulu itself in the Central African Republic and Yulu-Binga with 7,000 speakers in Sudan as main dialects.

Fongoro is a language near extinction and spoken to the south of the Sudan-Chad border by a handful of people.

Shemya (Sinyar) is spoken south of the Sudan-Chad border by 7,500 people.

Kara is a group of dialects consisting of Fer, spoken in the north of the Central African Republic, and Gula. They are spoken by 5,000 people in Sudan.

b. Bongo

Bongo is a language in the southwest of Sudan near Tonj and spoken by 7,500 people. Its classification follows the advice of Pascal Boyeldieu.

c. Modo-Baka Group

B'eli is a group of dialects spoken in south central Sudan, at the river Naam, consisting mainly of Modo with 15,500, B'eli proper with 8,000, Moda with 1,000, and Jur-Modo also with 15,500 speakers.

Baka is a language found around the Sudan-Congo border with 26,000 speakers.

Morokodo is a group of dialects found in southwest Sudan in the Bahr el-Jebel district with 3,500 speakers.

d. Moru-Madi Group

Moru dialects are found in the Bahr el-Jebel province, in the south of Sudan and not far from Juba, and have 70,000 speakers.

The subgroup Avukaya is a group of languages that are important in terms of their number of speakers. They are dispersed within a triangle with a corner in the south of Sudan, the north of Uganda, and the northeast of the Democratic Republic of Congo. It consists of Avukaya with 40,000 speakers, Logo with 210,000, Keliko with 15,000, Higher-Lugbara with 488,000, and Lower-Lugbara with 589,000 speakers. Each of these languages has several dialects.

Madi is a group of dialects that stretches from the north of Lake Albert in Uganda up to Sudan, with 150,000 speakers.

e. Mangbutu-Éfé Group

Mangbutu dialects are found in northeast DR Congo with 650,000 speakers.

Ndo consists of two dialects that are found in the same area and that have 300,000 speakers.

Mamvu-Balese is a group of dialects spoken in northeast DR Congo, west of Lake Albert, consisting mainly of Mamvu (or Tengo) with 60,000 speakers; Éfé, one of two Nilo-Saharan languages spoken by the ethnic group also known as "Pygmy," with 20,000 speakers; and Balese or Lese with 50,000 speakers.

f. Mangbetu-Asua Group

Mangbetu, not to be confused with Mangbutu, is spoken by 650,000 people in northeast DR Congo and has one dialect, Lombi, that has 12,000 speakers.

Asua, the other Nilo-Saharan language spoken by “Pygmy” people, has only a handful of speakers, who are better known as “Aka Pygmies.”

g. Kresh-Aja Group

This is a group of two languages whose dialects are found in the southeast of Sudan in the Bahr el-Ghazal, near the Chad border. Kresh (or Kreish) is a group of dialects with 16,000 speakers (Boyeldieu 2000:13). Aja is a language spoken by 200 speakers in the region of Yulu-Binga (see earlier discussion).

h. Lendu Group

This group of dialects is spoken in Ituri, in the northeast of the Democratic Republic of Congo. The principal dialects are Badha or Baledha – called Lendu by the Bantu – spoken by 760,000 people, Bendi with 32,000 speakers, and Ngiti with 100,000 speakers.

7. Berta

In the center of the border between Sudan and Ethiopia there are about 100,000 speakers of this group of dialects. The great majority are found in Ethiopia. There are numerous dialectal variants with significant differences among them but not well identified. Among these, one finds Undu, Mayu (which has undergone a great deal of Arabic influence), Fadasi, Gebeto, and Wetawit. Aka, Molo, and Kelo, formerly also considered dialects of Berta, have been reclassified with Gaam by Bender within a group called Jebel (see “South Eastern Sudanic”).

8. Kunama

This dialect group is spoken in the southwest of Eritrea, near the Nara, by 140,000 people and called Bada, Baza, or Bazen by its neighbors. The principal dialect is Marda, found near the town of Barentu in the northeast of the Kunama language zone. Ilit, spoken near Haikota, is a particular dialect

since the fewer than 1,000 speakers consider it a separate language. Other variants are Barka, Bitama (nearly extinct), Tika, and Setit.

9. Koman

This is a group of languages originally spoken on either side of the Sudan-Ethiopia border between the White Nile and Sobat, near the town of Asosa in Ethiopia. This group is called Koma by Tucker and Bryan (1956) and Coman by Greenberg (1963a).

Twampa or Uduk speakers migrated from Sudan to Ethiopia and number 20,000 people. Komo or Koma in Ethiopia has 11,500 speakers and Opo or Shita has 3,500 speakers. Kwama in Ethiopia has 15,000 speakers and is perhaps a dialect of Komo. Finally, Gule, an extinct language replaced by Arabic, was originally spoken in Sudan.

10. Gumuz

North of Berta and spoken by 90,000 people is this group of dialects found on the Sudan-Ethiopia frontier, near the White Nile. The language is also called Ganza or Gunza. Various dialects, such as Sese (or Saysay), Sai, and Disoha, correspond with various clans. This group has also been classified by others as part of Koman or a branch of Koman.

11. Kuliak

This group, also called Rub, consists of three languages spoken in northeast Uganda. Its presence in the Nilo-Saharan phylum is clear, but its position within this phylum is still debated.

Nyangi or Nyangiya is probably extinct. Ik (or Teuso or Teuth) is spoken by 6,000 speakers. Soo (or Tepeth or Tepes) is spoken by 1,000 speakers, down from 1,500 speakers, recorded in the middle of the last century.

12. Kado

Originally known as Kadugli-Krongo, this group consists of a number of languages found in the Nuba Mountains in Kordofan, Sudan. Its place in the Nilo-Saharan phylum is still controversial. The puzzling particularities of these languages, such as the nominal classes, are here considered a result of the long coexistence with languages of the Kordofanian family.

Mudo-Yegang-Kufo is a group of dialects spoken by 5,500 people. The dialects are also called Tulishi, Keiga, and Kanga, respectively, by Stevenson after the mountains where they are found.

Miri-Talla-Tolobi-Sangali are dialects spoken by 81,000 people. They are also known as Miri, Kadugli, Katcha, and Tumma by Stevenson, again named after the mountains where they are found.

Finally, Krongo-Talasa are dialects with 22,000 speakers.

13. Shabo (?)

Shabo is also known as Mikeyir or Mekeyir, and its speakers consist of a handful of hunter/gatherers who are found inside the region of the Majang language (Surma Group), south of the town of Metu in eastern Ethiopia. Its place in the Nilo-Saharan phylum is isolated and uncertain. It has been classified with different groups and has even been considered a mixed language of Nilo-Saharan and Afro-Asiatic stock (Fleming 1991: 399).

D. LEXICAL CORRESPONDENCES

Before lexical correspondences between Meroitic and North Eastern Sudanic (NES) languages are presented, it is necessary to explain why NES languages are the better candidate for the linguistic position of Meroitic. This was demonstrated at length by Rilly in 2010 through a large-scale comparison within all Nilo-Saharan branches. The presentation of such a comparison is beyond the scope of this volume. Similarly, the reconstructions of proto-Nubian and proto-NES are the result of extensive comparative research that necessarily precedes the lexical correspondences presented here.

On the list of thirty-nine lexemes with a confirmed meaning in the basic vocabulary that has been used in the following comparison, twenty-four allow a convincing comparison of the NES languages. Outside the basic vocabulary another seven lexemes also provided acceptable correspondences in the light of ongoing studies of proto-NES. The study of lexical correspondences should not proceed phoneme by phoneme but rather term by term. The synthesis of phonetic observations is discussed in a later chapter.

Each Meroitic term is followed by a reconstructed phonetic transcription – there may exist various possibilities – and a translation. For those that are proto-NES, the proposed form is accompanied by its level of reconstruction (see Appendix for further information). Without any indication

to the contrary, the given translation is for the group of NES languages. The number indicated refers to the series given in the Appendix. Nubian, Taman, and, each time it is possible, Nyima are represented by the proto-forms reconstructed for each group. If there is a reference to a specific language, its abbreviation is used. Note that V indicates a vowel that cannot be more accurately reconstructed.

1	MEROITIC	PROTO-NES	Nara	Nubian	Taman	Nyima
	<i>Abr</i> [abara], [əbara] man (male)	Ⓐ *ab-ən “father” No. 140	àbìn	*aboo “my father”	*abba “my father”	*-Vbaŋ (N)

It is possible that this word is a cross between two roots, one represented by Didinga (Surma) *boro* “man (general)” and quite present in Nilo-Saharan. It has the advantage of explaining the initial vowel. The suffix and its nasal in the proto-NES term are not present in Meroitic and indicate a parent. This is not problematic since the word is generically used for “man (male)” and does not express a line of kinship in the known occurrences. As it is, this morpheme is not represented in all the groups within NES and does not seem to have been systematic. For instance, in the word “father” in the Nubian Group, *baab(-Vn), there is a suffix conserved in Birgid as well as in Kordofan dialects, but it is lost in KD, Nobiin, Old Nubian, and Midob. It is probable that another form existed in proto-NES with the root *ab (or *abə-?) with the meaning of “male.” Nara has an adjective àbùk-kù “male” (pl. àbùk-tùgù). The noun *àbìn* also signifies “father” and “man (general).” Hence the semantic correspondence is not difficult.

2	MEROITIC	PROTO-NES	Nara	Nubian	Taman	Nyima
	<i>are-</i> [ar] “take or receive”	Ⓐ *ar “to take” No. 53	(hìnd)	*aar-	*ar-i	*ur

This Meroitic root is well attested in all the NES languages with the notable exception of Nara. It may have reduced the numerous verbs of similar meaning that can be reconstructed in proto-NES. The particular vocalization in Nyima is most likely due to a vowel harmony phenomenon, which indicates that the proto-NES derivation had an extension *ar-u-. It is even possible to connect the Meroitic composite *arohe-* “to take, to protect.”

3	MEROITIC	PROTO-NES	Nara	Nubian	Taman	Nyima
	<i>ato</i> [attu] “water”	? ©*as-ti “water” No. 51	<i>hātàrà</i> “river” (cognate ?)	*es-ti	(*kal)	(*bónj)

The proto-NES term for water is *mba-n or *mba-ŋ. The Meroitic word is an innovation in the Eastern Group, shared by Nubian and, if the preceding term is indeed cognate, eventually Nara. Nara’s initial *h-* is perhaps epenthetic, but the final syllable and the nongeminated /t/ remain unexplained. In old Meroitic, the term was /asta/, known after the Greek transcriptions of the name of the Nile and its tributaries. The regressive assimilation of the *s gives a historically geminated consonant in Meroitic, parallel to its development in proto-Nubian (Kordofan) *óṭ-ṭu “water,” from *es-ti. The word, both in Nubian and in Meroitic, is composed with the help of a suffix *-tV, which may have been the singulative marker *-ti in proto-NES. In proto-Nubian, the final /i/ has led to an inflection of the original *a to an *e. The overall reason for this innovation of the Eastern Group remains to be determined.

4	MEROITIC	PROTO-NES	Nara	Nubian	Taman	Nyima
	<i>dime</i> [dim] “cow”	Ⓢ*teg-i “cow” No. 188	<i>dùù</i> “sheep”	*tegi	*te / *tigine	(*bār)

The correspondence between the terms is too approximate for Meroitic to be a direct descendant of proto-NES. The change of /d/ into /t/ is common; it is found in Nara and sporadically in Taman, and it is systematic in western Nubian. But the inverse is rare. Nevertheless, Nara provides an example here; its term has been subjected to a semantic innovation parallel to that of Birgid and Midob. The Meroitic word could be retained from an older root rather than a reconstructed one reflecting Nubian and Taman terms. It may also look close to Midob *tímmít* “giraffe,” a nickname for this animal that is often found in African languages (see Bender 1996, No. 345) but the regular Nubian and Kordofan Nubian root for this animal is *jaab (cf. Jakobi 2001:131, who gives *jáb).

5	MEROITIC	PROTO-NES	Nara	Nubian	Taman	Nyima
	<i>dm-</i> [dam]- “to take, receive”	Ⓢ*dám- “to gather, take” No. 37	<i>nàm-</i>	*dumm-	(dâyè) (T)	dúm- (N)

The correspondence is ideal. The parallel is equally satisfactory on the semantic level. This verb is one of four verbs reconstructed for proto-NES with a general meaning of “to take.” The initial nasal in Nara can be explained by an attraction of the nasal that follows, a phenomenon also sometimes found for Nubian. The Taman term perhaps should not be considered cognate since the most convincing forms were not present in all the relevant languages.

6	MEROITIC	PROTO-NES	Nara	Nubian	Nyima
	<i>erike</i> [erik(ə)] “begotten”	Ⓢ*ar- “to give birth to” No. 56	*-alla-	*ir- ír-k-í (NK)	*ar- “pregnant”

Taman does not provide a cognate term in this series. The Nara term is taken from *m-àllàà-gù* “sterile,” which consists of a prefix for a negative *m(a)-* and has transformed the original *r into an /l/. As seen earlier, proto-Nubian originally had a verbal suffix *-i, from the inflexion *ir-(i), which was derived from *ar-i. The extension with -k is found in Kordofan Nubian; the latter group contrasts a simple verb *ír-í* with a frequentative *ír-k-í* (Jakobi 2001:114). In Meroitic, the frequentative form -k became fossilized with the meaning of “child of a father.” This semantic specialization is certainly a Meroitic innovation, since in the other NES languages, the same verb indicated “to give birth” and “to beget.”

7	MEROITIC	PROTO-NES	Nara	Nubian	Taman	Nyima
	<i>xlbi</i> [yalabi] “bull”	Ⓢ*gur “bull” No. 179	bôrô (M)	*gur	(*muger)	gósó (N) (cognate?)

The form given for Nara is that of the dialects of Mogoreeb and Saantoorta. The Nyimang form, which resembles the proto-NES, is, however, an uncertain cognate because of the unexpected /s/. The Taman have substituted the NES root with a term that denotes all dangerous animals. The Meroitic word has an *x* that refers to the *g in Nubian and a Meroitic /a/ to the rounded vowel /u/. Only /l/ from *r is unexpected, but changing from a glide to a trill is not impossible; it is, for example, frequent in Nara.

8	MEROITIC	PROTO-NES	Nara	Nubian	Taman	Nyima
	*xre [yar] “meal”	? Ⓢ*gor- “to chew” No. 110	(ǰakull-)	goor- (KD)	—	kwòròm (N)

In spite of the asterisk (the word is attested only in the assimilated group *xmlo* “good meal” from *xre mlo*), the Meroitic word is certain. It is corroborated by the proximity to the verb *xr*, which means “to eat” or “to feed.” It is not related to the NES root for “to eat, food,” which is *kal-, but to another root, *gor-, undoubtedly older since it is well attested in the Nilo-Saharan domain. It is, however, preserved in the NES languages of Nubian and Nyimang with the meaning of “to chew.” This meaning does not pose any problem since the Meroitic term is applied to a meal primarily consisting of meat and the verb *xr* for bread, which are foods that require chewing. It is noted that numerous African languages distinguish between two verbs with respect to eating, namely, “to eat hard things” and “to eat soft things.” It is possible that in modern languages the second has been generalized at the expense of the first, which has become “to chew.”

Meroitic has transformed *g in initial position into *x* [ɣ], and there is once again an /a/ opposite the proto-Nes *o ~ *ɔ.

9	MEROITIC	PROTO-NES	Nara	Nubian	Taman	Nyima
	<i>kdi</i>	Ⓢ *kad-i ~ *kar-i	kàdè	*kar(r)i	(*ir)	*kàrí
	[kaɖi]	“woman”	“sister”	“female”		
	“woman”	No. 66				

In order to account for all the retroflex sounds in NES languages, it is necessary to suggest an alternation of *d ~ *r in proto-NES; for instance, there is free variation in Tama between *kédì* ~ *kérì* “it is warm” (Pierre Palayer, pers. comm.). Meroitic has /d/, as does Nara, with the difference that the Meroitic phoneme is retroflex in intervocalic position. Nubian has preserved the NES root in a related sense, “female,” but has substituted for “woman” the term *il-di, which resembles the Taman form. The NES root for “woman” has disappeared with this meaning in Nara, replaced by *ánin* “mother,” but can be found in compounds, such as “sister” and “girl” or “young girl,” which in Hikir is *don-gadi* according to Reinisch (1874), in Koyta *dòŋ-gòdì*, with harmonization of the vowel of *kadi. The word may be reconstructed as *don + *kadi; the velar becomes a sonorant in this position. The first element *don is undoubtedly the one that remained in Nara of the plural in proto-NES *topi “children.” The compound would then originally have been a plural, “female children.”

10	MEROITIC	PROTO-NES	Nara	Nubian	Taman	Nyima
	<i>kdite</i>	Ⓢ *kad-i-ti	kàdè	*kegi-di	(*ai)	(áŋéné)
	[kaɖit(ə)]	“sister”				(N)
	“sister”	No. 171				

Although this correspondence between Meroitic and the NES languages is one of the more convincing ones, it has escaped the attention of Meroiticists, because the proto-Nubian root no longer has the rare retroflex and features a /g/ that seems opposite to something cognate with Meroitic.

The Meroitic term consists of two forms, *kdise*, more frequent in the more recent era, and *kdite*, the only attestation of which is found in royal texts and which has been kept in later times at a few sites in Lower Nubia such as Gebel Adda. Other nouns also present this alternation, in particular *mse* / *mte* “small,” “child.” Here also the form with *-te* is the older one. It suffices to state that in the word *kdi-te* one part is *kdi* “woman.”

The form that can be reconstructed for ancient Nara is *kàdè-tè, which is a compound, since the *t would otherwise become a *d in this position. The word is, both in its form and in its structure, so close to the Meroitic *kdite* /kadite/ that it may convince those who are hesitant to assume a shared ancestor of these two languages.

The proto-Nubian *kegi-di “sister” no longer exists in this form and is now translated as a compound meaning “daughter of the mother” (Old Nubian, Nobiin, Kenuzi-Dongolawi, Midob) or “child of the mother” (Kordofan Nubian, Birgid according to MacMichael 1920). The divergence between the two expressions shows a possible recent innovation. This form that is reconstructed, *kegidi “sister,” is most probably a compound, because the simple roots of proto-NES have a maximum of two syllables. The second term is then *ti “child,” known only as part of a compound. The initial of this second term became voiced, as is common for consonants in this position within a word. The change from proto-Nubian *kedi-di “sister” to *kegi-di has parallels in other words of proto-Nubian, such as *agi “we” and *ugi “you,” which became *adi* and *udi* in Birgid.

11	MEROITIC	PROTO-NES	Nara	Nubian	Taman	Nyima
	<i>ked-</i> [ked] or [kəd] “to slaughter”	Ⓐ *ḡkod- “to slaughter, to cut up” No. 1	kàd- /kòd-	*ḡodd-	*kid-	kaí (N)

The prenasalized velar in proto-NES is a hypothesis that would reflect the Nubian forms. The other languages suggest that the initial was a simple velar *k. This is also the case for Meroitic, which kept the voiceless initial. The same cohesion is found at the level of the final consonant /d/, which is silent in Nyimang. The vowels are more complicated. For instance, Nara *kàd-* means “to slaughter (an animal),” “to cut,” while *kòd-* means “to cut down a tree,” “to cut in pieces.” Overall, the semantic correspondence is

satisfactory. The Meroitic meaning is close to “to cut into pieces” and is used differently from the word “to kill.”

12	MEROITIC	PROTO-NES	Nara	Nubian	Taman	Nyima
	<i>l-</i> [la] “to give”	Ⓐ*te(n)- Ⓒ*de(n)- “to give” No. 47	néè	*deen-	*ti(n)-	*tɿŋ “give me”

The situation of proto-NES is difficult to reconstruct here. The Nara form that is given means “I give” (with a singular object). With a plural object, it becomes *nínè*. The infinitive is *ná-àdò*. Proto-Nubian has two verbs “to give,” *deen- “to give me, us,” and *tir-, used for other persons. Proto-Taman shows a radical *ti with an *n from the third person of the imperfective and all forms of the perfective. The form given here for proto-Nyima is the same in Nyimang, Mandal, and Afitti, where the final velar nasal is a regular reflection of the proto-NES *n in final position.

At first glance the Meroitic verb has little affinity with the proto-NES root. But a comparison, particularly with Nara, suggests that the initial *d of the eastern proto-NES verb *de(n) was subjected to a lambdacism (a change into /l/), a phenomenon that is well attested for initial /d/ and /l/ but rarely for initial /t/ and /l/.

13	MEROITIC	PROTO-NES	Nara	Nubian	Taman	Nyima
	<i>lh</i> [lay ^w a] “large, big”	Ⓐ*dag-u- “large” No. 81	dùb-kù	*dag-ul	*dawud-	*duga

The presence of the proto-NES *u has caused the labialization of the *g to /b/ in Nara and Afitti. Here the same characteristics mentioned earlier are found: lambdacism of the initial and transformation of the occlusive *g to a fricative. It is the labialized variant *h* and not the *x* that appears, showing a trace of the proto-NES *u.

14	MEROITIC	PROTO-NES	Nara	Nubian	Taman	Nyima
	<i>mlo</i> [malu] “good, beautiful”	Ⓐ*mel- ~ *jel- “good, beautiful” No. 15	mílóól-kù “smooth” (cognate?)	*e(e)l-	wél-nìk (T)	à-’mèl-áj “beautiful” (N)

The original NES root is *mel-, but it has an alternative form *jel-, derived from the previous form with a palatalization of the nasal due to the vowel *e. This complex scenario is found in several other series.

The adjective in Meroitic shows the proto-NES *m. As in other words, there is an /a/ opposite the proto-NES *e, which is perhaps derived from an inflection *mal-i. Dongolawi *m-illi* “bad” (< proto-NES *m(a) + *jel-i ?) contains a suffix -i, and it exists in a variant *mli* for *mlo* in Meroitic, reserved for female personal names (Rilly 2007:23).

15	MEROITIC	PROTO-NES	Nara	Nubian	Taman	Nyima
	<i>mte ~ mse</i> [mate] ~ [maçe] “child, son”	? ③ *mat- “boy” cf. No. 55	(tíí)	(*too-di)	*maata ~ *maasa	(áṛi) (N)

The root is well attested in other Eastern Sudanic languages, such as Dinka and Majang, but it has only a few traces in NES. The Taman form shows a striking resemblance with Meroitic. Both have two alternate forms where the variations are the same. This may be a coincidence.

16	MEROITIC	PROTO-NES	Nara	Nubian	Nyima
	<i>pwrite</i> [bawarit] or [pawarit] “life”	© *bor-idi “strength” No. 71	bóór-ǰi	*beer-idi	(kwódrǰí-gídí) (N)

Despite the many uncertainties and still unresolved details, this series of words is one of the most interesting. It allows the proposition that an abstract derivational suffix in Meroitic /it/ corresponds closely with proto-NES *-idi. This morpheme is undoubtedly composed of an adjectival suffix *-i. Its reduction from *-ti in proto-Nara, through first becoming -ǰi, suggests that the first vowel *-i has not been systematic. In proto-Nubian, one may reconstruct *-idi as a result of KD -iid, Old Nubian -rr, Nobiin -id, and Midob -(i)dí. It permits a reconstruction of an abstract noun. In Tama, the language of the Taman Group for which this suffix is known and only for verbal roots, one finds -Vt with variable vowels (pers. comm. Pierre Palayer). Despite the resemblance, it is not certain that the Nyimang suffix is cognate with proto-NES.

Once again the Eastern Group of NES is linked to the Meroitic word. The grapheme *p* in Meroitic probably had a phonetic value [b]. The original initial *b in proto-NES would thus be conserved in this word. The central *w* of the Meroitic word is more difficult, but the long vowel of Nara and Nubian is perhaps the result of an intermediate consonant that is now lost; a reconstruction of proto-NES such as *bog-ir “strong” instead of *bor might explain more of the vocalic difference between proto-Nubian *beer- (< *begir with anterior vowel harmony) and Nara bóór- (< *bogor- with posterior vowel harmony).

17	MEROITIC	PROTO-NES	Nara	Nubian	Taman	Nyima
	<i>qore</i>	Ⓐ * (Ñ)ur	kèrà (S)	* ur	* (Ñ)ur	* Ør-
	[k ^w ur]	"head"	(cognate ?)			
	"king"	No. 180				

The root *(ŋ)ur is present in all the groups. It is not certain that the Nara word for "head," *kèlèla* in Hikir, *kèrà* in Saantoorta, should appear in this series. The word for "chief" is *wòlî* in Hikir and could be a better cognate since the /l/ in this dialect often corresponds to *r in proto-NES. This detail, next to the derivation of "king" after the word "head" in Nubian, allows the interpretation that these two words are the same in Meroitic.

For this word and some others proto-NES seems to have had an alternative where the *ŋ was originally silent. As in Tama, Meroitic has conserved the velar initial, but in the form of an occlusive /k^w/, written *q* and labialized by the contact with a vowel /u/.

18	MEROITIC	PROTO-NES	Nara	Nubian	Taman	Nyima
	<i>sd-k</i>	Ⓑ * sur-	sáw-âg	* sukk-	* sur-	(nàsà) (N)
	[çaðaka]	"to descend"	"to pass"			
	"travel, return"	No. 41				

The Nara verb, here given as an imperative, contains an auxiliary ("con-verb") -*âg-* next to the root. As is clear from this series one may suggest that the *r at the end of the radical has become silent, a common feature. The Nubian form is probably an assimilation of *sur-k- with the iterative suffix *-k. The root reconstructed for Taman is from the Mararit dialect. It is a complex verb but the composition is not entirely clear. The Meroitic word is apparently no longer a verb, although the meaning is undoubtedly "return." Various suffixes allow the creation of such a nonverbal word in the NES languages, such as the suffix *idi mentioned elsewhere. It is conceivable that Meroitic *sdk* has a marker /a/ attested also in Tama. As in Nubian, the verb upon which it was based has the iterative suffix -k. The /d/ that compares with proto-NES *r is not problematic (see section 9). The vocalization is, however, very different, but it has been noted previously that there seems a correspondence between Meroitic /a/ and proto-NES *o or *u.

19	MEROITIC	PROTO-NES	Nara	Nubian	Taman	Nyima
	<i>st</i>	? Ⓒ * so-ti	(bàllà)	* os-ti	(*mar)	(kírè) (N)
	[çata]	"foot"				
	"foot/feet"	cf. No. 145				

The root that was reconstructed for proto-NES was *mar, but it seems that this mainly indicated the leg, as is the case in Tama, where the word “foot” is an innovation formed after the verb “to walk.” The two eastern branches of Sudanic allow a reconstruction of *so-ti in proto-NES, a singulative form perhaps from < *sog-ti. The proto-Nubian form is suggested to be a metathesis of the proto-NES form, a process also found elsewhere. The Meroitic *st* is adequate in structure to compare well with either proto-NES or proto-Nubian.

The root was not maintained in the other branches, and this seems partly due to innovations. The filiation of the Meroitic word with the root of proto-NES is important for the history of the morphology of the language of Kush. The singulative suffix *-ti in proto-NES has survived in Meroitic in the form of /-ta/. The early Meroitic word for “water,” *asta-*, taken from Greek transcriptions for the names of the rivers of Sudan, rests on the same evolutionary process, although the change to /tu/ in Meroitic *ato* remains obscure. Meroitic, just like Nara and Nile Nubian, shows a suffix that is fossilized and has become an integral part of the radical. The latter two groups show the nominal plural suffixes while Meroitic has resorted to a determinant to indicate the plural of a name.

On the phonetic level, the correspondence between a rounded vowel, here *o, in proto-NES and /a/ in Meroitic is once again attested.

20	MEROITIC	PROTO-NES	Nara	Nubian	Taman	Nyima
	<i>teneke</i> [tenək(ə)] or [tenek(ə)] “west”	Ⓢ *tun- “evening” cf. No. 130	(kìnèénìṅ)	tunno (KD) “afternoon”	(*ori-V)	*túnì “night”

With the exception of Nile Nubian and Nyimang, which present forms close to Meroitic, the NES languages generally have a word that means “sunset.” The semantic resemblance between “west” and “evening” is natural.

The term in proto-NES may contain a suffix *e or *i (*tun-i-ge ?), which could explain the vowel radical that appears in the Meroitic word.

21	MEROITIC	PROTO-NES	Nara	Nubian	Taman	Nyima
	<i>tre</i> [tar] “to give”	Ⓐ *te(n)- “to give” No. 47	(néè)	*tir-	*ti(n)-	*tVg

In eastern NES, it seems that the verb has split into two forms, *de(n) and *te(r). Nubian also has two verbs “to give,” *deen- and *tir-. The latter

is used for “to give to you, to give to him/her,” i.e., with a second- or third-person singular. Meroitic does not have this distinction. Nyima seems to have expanded the original root with an applicative suffix from the dative NES *-ga.

The origin of the *-r at the end of the radical in Nubian and Meroitic is unclear. There exists a Meroitic verb *te-* that also means “to give,” but perhaps there is a variant **tere* /ter/ from *tre* /tar/, where the -r is assimilated with the suffix that follows.

22	MEROITIC	PROTO-NES	Nara	Nubian	Taman	Nyima
	<i>wide</i> [wid(ə)] “brother”	ⓑ*wer- “brother” No. 75	(ánintū)	*wer-i	–	-mùr “friend”

Parallel to the word for “sister,” the NES languages rarely keep the original term for “brother.” They are replaced by words for older and younger brother (Taman) or by innovations such as “son of the mother” (Nile Nubian) or “child of the mother” (Nara, Western Nubian, Nyimang), the latter also indicating the sister. In Birgid, there are two words for “brother,” one given by Thelwall (1977) as *buzona*, which goes back to *fuz-on and is in regular correspondence to proto-Nubian *bes-an “younger brother”; the other word was given by MacMichael (1920) as *immeroon*, which has a suffix -o(o)n for kinship terms and a first-person singular possessive prefix *im-*, so that the root reads *-mer-*. This word would read *wer in proto-Nubian. Similar words in other Nubian languages appear to mean “friend.” This meaning is likely to have been generalized when innovative terms for “brother” were created. As in the word for “sister,” Birgid is a precious witness of an early state in NES languages. A similar development can be proposed for Nyimang’s word for “friend” -mùr (Rilly 2010:368). Other members of the NES family seem to have lost this root (for instance, Nara).

23	MEROITIC	PROTO-NES	Nara	Nubian	Taman	Nyima
	<i>wle</i> [wal] “dog”	ⓑ*wel “dog” No. 27	(wòs)	*wel	(*wuusi)	wəl (A) gíl (N)

The reconstruction of this word at a higher level in NES is impossible since there are two roots, *wel and *wus-i, and it is not clear whether they are related. Meroitic has, once again, a root in common with Nubian. The Nyima group has two forms that are difficult to reconcile. Although the Affiti term seems borrowed from Nile Nubian, it is more plausible that

both terms are Nyima, even though the phonetic correspondence is still unexplained.

24	MEROITIC	PROTO-NES	Nara	Nubian	Taman	Nyima
	<i>yer</i> [era] or [ira] “milk”	ⓑ <i>*er-</i> “milk” No. 96 / 165	(sàà)	<i>*er-ti</i> “breast”	(<i>*ji-gu</i>)	<i>*elo</i>

This root has taken the meaning “breast” in proto-Nubian with the singulative marker **-ti*, which is absent in Meroitic and Nyima, where it simply indicates a liquid. Nara and perhaps Taman have a different root from the form **sV-* that is found in Nilotic in general as **ca(kə)*, and in Temein, where it is *sàá*.

1. Supplementary Correspondences

The previous series illustrated the basic vocabulary of Meroitic in the NES family. The comparison is sufficiently conclusive to indicate another series where the relation with Meroitic has also become apparent as the reconstruction of proto-NES progresses.

25	MEROITIC	PROTO-NES	Nara	Nubian	Taman	Nyima
	<i>abese</i> [abeçe / əbeçe] “gazelle”	ⓑ <i>*wes-i</i> “gazelle”	(sèlémè) “gazelle”	<i>*wes-i</i> “gazelle”	môpô “gazelle” (T)	<i>*wosi</i> “gazelle”

During the 2008 Meroitic conference in Vienna, Jochen Hallof presented unpublished texts from the temple of Amun in Qasr Ibrim. They were images of animals and texts that read *X qo-li* “this X,” where the X is undoubtedly the name of the animal. This enabled the words for “gazelle,” “snake,” and “falcon” to be identified. The first term, as it is reconstructed for proto-NES through the eastern branch of proto-Nubian and proto-Nyima, appears linked to the Meroitic word. The initial vowel in *abese* cannot be readily explained and is perhaps a prefix or an epenthetic vowel (see also SNAKE).

26	MEROITIC	PROTO-NES	Nara	Nubian	Taman	Nyima
	<i>abore-</i> [a(m)bur] “elephant”	Ⓐ <i>*aggur</i> “elephant” No. 52	(kùrbè)	<i>*aggur</i>	<i>*aŋ(g)or</i>	<i>*Vr</i>

The name of the elephant is not yet attested on its own. The role of this animal in the Meroitic civilization is not clear. Its representations are rare, and it does not seem to have occupied a particular place in Kushite religion. One site is a clear exception: Musawwarat es-Sufra. Here the elephant appears in monumental sculptures as a guardian of the interior entrance to the Great Enclosure; numerous graffiti images of the same structure show this animal. In the Lion Temple, two great images of the animal adorn the inner rear wall. It appears on the columns that frame the god Sebiumenter and again with prisoners on the exterior western wall of this sanctuary. The eminent place that this animal holds in Musawwarat is still unexplained.

The following hypothesis indicates the role of the elephant at Musawwarat by way of place-names. The name of the site in Meroitic is *Aborepi* and appears in multiple graffiti renderings such as *Apedemk Aborepi-te-li* “Apedemak who is at Musawwarat” (see Wolf 1999). The name of the place appears in Egyptian transcriptions in the form of *Jpbr* in texts of the Lion Temple. The structure of Meroitic syllables allows us to view this word as consisting of two elements, although neither can be further clarified on the basis of known Meroitic texts.

The first element, *abore*, has an excellent cognate in proto-NES *aŋgur, also meaning “elephant.” As will be explained elsewhere, there is an evolution of *g > /b/ in the presence of labiovelar vowels that are evident in NES languages, particularly Nara. In Midob, the change is from *ŋg > *mb > mm to arrive at the form *ámmát*. If the suggestion is correct, the Meroitic *abore* could correspond with the pronunciation /ambur/, with a nasal before the occlusive that is never written in Meroitic. But it is equally possible that the prenasalized *ŋg was reduced to *g, in this case becoming closer to /abur/.

This hypothesis, which agrees with linguistic evidence, explains the overabundance of representations of this animal in Musawwarat. Originally, the place may have been associated with the animal by a direct genitive, perhaps “the resting place of the elephant” (cf. Old Nubian ꞙ- “to be, to rest”).

27	MEROITIC	PROTO-NES	Nara	Nubian	Taman	Nyima
	<i>Apede(-mk)</i> [əbede] god-creator	Ⓢ*aber-di “creator” No. 43	èbbéré	*ebi-ṭu (PNK)	loanword from Arabic	ábṛḏi (N)

The lion god Apedemak is the head of the indigenous Meroitic pantheon, as Amun is for the gods borrowed from Egypt. It appears at the

southern wall of its temple at Naga with two sets of arms and three heads. It is a god of destruction, armed with a bow, and at the same time a god of fertility, who holds sorghum in the hand. It has a masculine and a feminine nature, typical for a creator god.

The word consists of a noun *mk* “god,” together with the lexeme *Apede-*, so that the name of the deity reads “the god *Apede*.” The initial /a/ is weakened to a schwa and finally disappears in the later renderings into *pedemk* (REM 0006, 0407, 0409, 0409, 0410, 1063, 1064B). The *p*, as has been suggested multiple times, represents an originally voiced /b/. The /d/ in intervocalic position is pronounced as a retroflex, close to the [r] in Egyptian, as is shown in the Egyptian transcription *Jprmk* of its temple in Musawwarat. The *r of proto-NES has probably been muted before the /d/, as in Nubian.

28	MEROITIC	PROTO-NES	Nara	Nubian	Taman	Nyima
	* <i>kele</i> [kel]	Ⓐ * <i>kore</i>	kòól (Nara)	koli (Dilling)	kiir (Tama)	*kɔɾ-
	* <i>kere</i> [ker]					
	“falcon”	“vulture”	“falcon”	“vulture”	“vulture”	“vulture”

One of the words from the Qasr Ibrim texts concerns the falcon that is rendered as *keqoli*. There is no final consonant for the radical of the noun, usually rendered as CVC- or VC-. It may have had one that, as is common, assimilated with the initial of *qo-li* “this.” The word for “falcon” is **kele* /kel/ or **kere* /ker/, if the cognates of the other languages are to be believed. This kind of assimilation between a sonorant and a velar consonant is not yet documented for Meroitic (see Rilly 2007:414), but it is known to become a geminated velar in Old Nubian (Browne 2002:19).

29	MEROITIC	PROTO-NES	Nara	Nubian	Taman	Nyima
	<i>ms</i>	ⓑ * <i>mas-i</i> ~ * <i>jes-i</i>	(kòòs)	*ees-i	(*ari)	ṛíjì (A)
	[maça]	“sun”				
	“sun”	No. 173				

The Meroitic word *Ms* refers to a deity, Mash (or Masa), of which there exist numerous occurrences in the texts. They describe individuals as “priests of Mash,” but there is no known representation of the god. Sun gods are figured in some reliefs, but there is no legend that gives the name of the deity. This name of a god is likely already attested in the “Crocodylopolis list,” a series of personal names from Kerma with Egyptian transcriptions from the sixteenth century BC (see Rilly 2007:11). It appears as part of a composition in the name *Ms-mni* “Mash Amun” on an archaic offering

table from Meroe (REM 0430). This is then easily interpreted as the Meroitic rendering of Amun-Ra.

On the basis of a comparison with Old Nubian **𐍎𐍅𐍕𐍅𐍕** “sun,” Nobiin *màfà*, and Dongolawi *masil*, Griffith once suggested that *Ms* has to be the local version of the god Ra. Methodological concerns prevented an immediate introduction of this word in the list of reconstructions. Proto-Nubian “sun” is *ees-i, and the Midob word is *pàssâr*, a loanword from Nile Nubian. Although Nara is quite close to pre-Nubian, the word for “sun” has a different root. In any case, the final -*ɣ* in Old Nubian and the -*l* in Dongolawi are likely to reflect the Meroitic determinant in *ms-l* “the sun.”

30	MEROITIC	PROTO-NES	Nara	Nubian	Taman	Nyima
	<i>nob</i>	Ⓐ *log-	<i>lòg</i>	*nogu-di	<i>luuda</i> (AS)	*log
	[nuba]	“silt, clay”	“earth”	“slave”	“clay”	“mud”
	“slave, Nubian”	No. 102				

The word “Nubian” (Nuba) does not have a Nubian origin but is from Meroitic (Rilly 2008). Taken from Greek in the work of Eratosthenes, who situated this “great people” to the west of the Nile in the third century BC, it has become a name for a people or, more precisely, a name for a foreign people. The ancient Nubians identified themselves differently in their own language, perhaps *Mag-ur ~ *Mag-i, if one trusts the names of Makuria (Kingdom of Dongola); **𐍎𐍇𐍐𐍐**, with vowel harmony, the name of the province of Nobadia in the Old Nubian texts; Mahas, the modern name of the principal region of the Nobiin language; and *Murgi*, as the Birgid call themselves, undoubtedly from *mug(u)ri with vowel harmony and metathesis.

The texts written in Greek have the Nubians describe themselves as *Νοῦβα* or *Νοῦβαδες* (FHN III:1181–1182, 1147–1153). In Old Nubian, the only known attestation of **𐍎𐍇𐍐𐍐** (= /*ṇoba*/) describes a day laborer, a farmer attached to land belonging to others, and not, as translated by Browne (1991:41), a “Nubian.” In Nobiin, the word *nob* means “slave,” a meaning that reappears in Meroitic. Proto-Nubian has a cognate word, the collective *nog-u, singulative *nogu-di “slave.” The word appears to be derived from proto-NES *log “silt, or fertile earth” and originally referred to farmers, probably since the work in the field was in large part performed by servants. However, the other NES languages have unrelated words for “slave,” with the exception of Nyima, which has borrowed the term from Nubian.

As in the example of “elephant,” the proto-NES *g in a labiovelar context becomes /b/ in Meroitic. This evolution took place in the early period. The change in consonant is accompanied by a delabialization of the *u, close to an /a/, a phenomenon that is not systematic but is found again in the

plural morpheme. It is particularly interesting to observe that the proto-NES *l- in initial position has become an /n/ in Meroitic. This confirms that the initial /l/ of Meroitic is a secondary feature of *d in proto-NES through lambdacism. But its principal implication concerns the Meroitic phylogeny. This change can be considered a characteristic of the Nubian Group. Although the example is, so far, unique, it is a strong one since it cannot be a loanword (Rilly 2008:218). It is possible to suggest that the change from *l into /n/ is the product of a specific branch within Eastern NES, which has generated proto-Nubian and Meroitic.

31	MEROITIC	PROTO-NES	Nara	Nubian	Taman	Nyima
	<i>pete</i>	©*wis-ti	wòsò	wissi (K)	*awi	(*sóm)
	[bette / bätte]	“serpent”	“serpent”	“serpent”	“serpent”	“serpent”
	“snake”	No. 169				

As explained for “gazelle,” the word “snake” could be deduced from the Qasr Ibrim finds. *Pete* was probably pronounced /bette/ or /bätte/ and corresponds with Eastern proto-NES. As in the word *ato* “water,” the sequence *-st is assimilated into /tt/. There is a correspondence between proto-NES *w > and Meroitic /b/. In other instances that were studied, there was a labiovelar *w in Meroitic that remained. It is quite possible that the correspondence illustrated with “serpent” is a later and local evolution since the Qasr Ibrim texts date to the third and fourth centuries AD.

IV Meroitic Phonology: Facts and Reconstruction

It may come as a surprise that it is possible to present even a tentative phonology of Meroitic when there are so few certainties about the language. Paradoxically, the reconstruction of the pronunciation of Meroitic is more certain than the translation of minor phrases.

The sources for this phonological system are of three kinds. The first may compare Meroitic terms with those of other languages: either those that have been borrowed in different periods from Egyptian or those that have been transcribed in Egyptian, Greek, or even Latin. There is, for instance, a Meroitic parallel *kdke* “Candace [Queen]” in Greek transcription: *κανδάκη*. This method of comparison was used extensively by Griffith for the decipherment of the script. The second may additionally examine variations in orthographic conventions, which, because of the phonetic nature of the script, give information about the similarity of the phonemes. For instance, the variant *mxe* for the most frequently written word *mhe* “abundant” suggests an articulatory analogy between /x/ and /h/. Finally, the third may attempt to use the first two methods to create a linguistic system of sounds. For instance, the presence of only four written vowels in the Meroitic vocalic system makes it more likely that there is a /u/ among them.

Among the Meroiticists, in particular Griffith and Hintze, these three methods have usually been combined. Only two studies have preferred the latter one exclusively, Zawadowski (1972) and Böhm (1987), but the results are highly contested, particularly because the limited knowledge we have of Meroitic does not allow the same precision as for living languages. The two other methods also have their pitfalls. The comparison with Egyptian collides with diachronic problems of pronunciation: Middle Egyptian shows notable differences in pronunciation from Demotic. Meroitic has ancient loanwords (in particular those for the deities) that appear in the Middle Kingdom, while the most recent loanwords (certain titles) are often derived from Demotic. Moreover, Egyptian, because its vocalization is rarely

marked in writing, is a poor candidate for understanding the vocalic system of Meroitic. Then, the study of orthographic variations also has its limitations. Some had the idea that if three independent graphemes are used for the syllables /ta/, /te/, and /tu/, these should refer to three phonologically different types of /t/ (Meinhof 1921–1922:3, Böhm 1987:10–12). In other words, the oppositions in phonology should also be present in writing, and vice versa. However, writing is most of all a diachronic phenomenon where tradition has added complications or simplifications to the system, as many orthographies of today's languages will illustrate.

The Meroitic writing system inherited an Egyptian system with hundreds of hieroglyphs but without any proper vocalic sign. This system, together with a number of previously mentioned scripts, was used parallel to the Meroitic writing system and, in combination, allows a careful reconstruction of the Meroitic phonology.

A. THE CONSONANT SYSTEM

Although the writing system is not the most reliable witness of the phonology of language, as will become clear, it is now accepted that the consonantal system of Meroitic is relatively simple. It is noted that the numerous phonemes of Egyptian such as /ʔ/, /ʕ/, /f/, /c/, /ɟ/ were not retained in Meroitic writing, and this clearly indicates their absence in the language of Kush. In the words of Griffith (1911a:22): "Absence of the peculiarly Semitic consonants and a general simplicity in the sounds of the language seem certain."

Although the Meroitic system may appear simple in terms of the number of consonantal phonemes, their phonetic values are not necessarily the same as those in European languages. As far as it is possible to confirm this, they differ greatly from the Egyptian phonemes, but their sound resembles that of some of the modern African languages such as Beja. Such a resemblance, probably an areal rather than a genetic one, is found across many other groups of languages in the world.

1. Stops or Plosives

There is, for a change, some consensus among Meroiticists about the three points of articulation for the stops: bilabial, apical or retroflex, and velar. In addition, a labialized velar is proposed here that corresponds to the grapheme *q* (Rilly 1999). There is less agreement on the series of consonants. Hintze has suggested two complete sets, one voiced and one voiceless. Others, such as Vycichl, are less certain about this distinction. In the

following, the opposition of voice is only maintained for the apicals /t/ and /d/.

a. Bilabials

The comparison of certain loanwords in Meroitic from Egyptian with the originals (and, where available, also their transcription in Greek) indicates a correspondence between *p* and *b* in the two languages. This equivalence is also noted in some transcriptions of Meroitic terms in Egyptian, Greek, and Latin.

Meroitic *b* / Egyptian *b* / Greek *β*, *π*, also in *ψ* / Latin *b*, *p*

- ▶ personal name Eg. *P3 B(j)k* “falcon” (Gr. Πβηχίς, Lat. *Beces*) / Mer. *Beke* personal name Eg. *T3 B(j)k(.t)* “female falcon” (Gr. Τβηχίς) / Mer. *Tebiki*
- ▶ personal name Mer. *B(e)rtoye* “Abratoye” / Dem. transcr. *3brtj*, Gr. Ἀβρατοεῖς
- ▶ personal name Mer. *Bekemete* / Dem. transcr. *Bkmtj*
- ▶ personal name Mer. *Snpte(-li)* / Dem. transcr. *Snptj*
- ▶ name of a deity Eg. *Īmn(-m-) Īp.t* “Amun of Luxor” / Mer. *Amnp*
- ▶ name of a deity Mer. *Apedemk* / Eg. transcr. *Īprmk*
- ▶ title Eg. *p3-mr-sn* “administrator of the temple” (Gr. (π)λεσωνίς) / Mer. *płsn*
- ▶ title Eg. *p3-rt* “agent,” “temple bursar” (Coptic πρητ) / Mer. *perite*
- ▶ title Eg. *wpwrtj* “envoy” / Mer. *apote*
- ▶ title Mer. *pqrtr* “crown prince” / Eg. transcr. *pkrtr*
- ▶ title Mer. *peseto* “viceroys” / Gr. transcr. ψεντις, Dem. *p(3) sntj*
- ▶ place-name Mer. *Qerbe* (location uncertain) / Lat. transcr. *Corambim*, *Curambeta*
- ▶ place-name Eg. *(Pr-)Nbs* “Pnubs” (Gr. Πνούψ, Lat. *Nups*) / Mer. *-Nbse*
- ▶ place-name Dem. *P(r)-3lq* “Philae” (Gr. Φίλαι) / Mer. *Pilqe*, *Pileqe*
- ▶ place-name Mer. *Phrse* “Faras” / Gr. transcr. Παχορας, Coptic παχωρας
- ▶ place-name Mer. *Npte* “Napata” / Eg. transcr. *Npt*, Gr. Νάπατα, Νάβατη

For Griffith, who had generated almost all these parallels, and for his immediate successors, the opposition between a voiceless bilabial stop [p] and a voiced one [b] was a given. Vycichl (1958:75) was the first to doubt this, and recent insight in Egyptian phonology has shown that modern Egyptian (i.e., contemporary with Meroitic), as well as Coptic, had a bilabial fricative

[β] that may have constituted an opposition between occlusive and fricative rather than voiceless and voiced.

The Greek transcriptions show both a voiced and a voiceless bilabial in the transcription, but they commonly transcribed Egyptian rather than Meroitic directly. The transcriptions are consistent apart from that of Napata, which both in Greek and Latin is directly transcribed from Meroitic and found with both a voiced and a voiceless variation. For example, both *Nabata* and *Napata* appear in Latin.

Other indicators show that *p* was, at first, only found in initial position, as is shown in the list from Crocodilopolis. In the passages in foreign languages of the Book of the Dead, the Meroitic phrases use the grapheme *b* but never *p*.

Moreover, if the current known lexicon of Meroitic is observed, the grapheme *p* is found thirty-five of sixty-one times as part of recognizable Egyptian loanwords, but there may be additional, less obvious, loanwords in there. For the rare and exclusively Meroitic words with *p* there are some variants with *b*. For instance, the verbal prefix *ps-* is sometimes written *bs-*, particularly in Karanog, Adda, and Qasr Ibrim, and the same holds for *qorpse* / *qorbse*, the plural genitive of the word *qore* “king.” Although generally more frequent than *p*, the grapheme *b* is rarely found in initial position, where, because of the weight of the Egyptian loanwords with an article, *p(3)* may have been generalized to *p*. It should also be noted, as suggested by Hofmann and proven by Török (1984:166, 170, 182 note 21), that the name of the Hellenistic god Serapis is transcribed as *Srbi* / *Srbe* in certain Meroitic personal names.

It is, therefore, not certain that the signs *b* and *p* were always transcriptions of distinct phonemes for the speakers of Meroitic. They may have inherited both signs for the same phoneme and continued their use, reserving the *p* for initial positions, where it is often found for Egyptian loanwords. It is also possible that in some regions and among certain groups, the influence of Egyptian may have contributed to an opposition of voiced and voiceless bilabials that was not originally present in Meroitic.

b. Apicals: The Problem of Prenasalization

Meroitic has two graphemes, *d* and *t*, that probably correspond to a pair of voiced and voiceless apicals. Their Egyptian and Greek equivalents are much less clear, and it is only in the last sixty years that, for example, the value of *d* has been well established. There are three distinct correspondences:

Mer. *d* / Eg. *r*, Gr. *ρ*

- ▶ personal name Mer. *Tenekitnide* / Dem. transcr. *3tngytnry3*
- ▶ personal name Mer. *Tqoridemni* / Dem. transcr. *Tqrrmn*
- ▶ name of a deity Mer. *Apedemk* / transcr. Eg. *Íprmk*
- ▶ place-name Mer. *Medewi* “Meroe” / Dem. transcr. *Mrw.t*, Gr. Μερóη

Mer. *d* or *t* / Eg. *nt*, *nd*, Gr. *νδ*, *ντ*

- ▶ name of a deity Eg. *Hr-nd-it=f*, Gr. Ἄρενδωτης “Harendotes” / Mer. *Arette*
- ▶ title Mer. *kdke*, *ktke* “Candace / Queen” / Eg. *kntiky*, Gr. κανδάκη
- ▶ title Mer. *peseto* “viceroy” / Gr. transcr. ψεντης
- ▶ title Eg. *hm-ntr* “prophet” / Mer. *at* “priest” (late variation of *ant*)

Mer. *t* / Eg. *t*, *d*, Gr. *τ*, *θ*

- ▶ personal name Mer. *Snpte(-li)* / Dem. transcr. *Snptj*
- ▶ personal name Mer. *B(e)rtoye* “Abratoye” / Dem. transcr. *3brtj*, Gr. Ἀβρατοεις
- ▶ personal name Dem. *Is-mt*, Gr. Σμιθς / Mer. *Semeti*
- ▶ name of a deity Eg. *Mwt* “Mout” (Gr. Μουθ) / Mer. name of a deity *Mt*
- ▶ place-name Mer. *Npte* “Napata” / Eg. transcr. *Npt*, Gr. Νάπατα
- ▶ place-name Mer. *Tolkte* “Naga” / Eg. transcr. *Tw(i)lkt*
- ▶ place-name Mer. *Qoreti* “Qurta” / Dem. *Pqs*, Gr. Κορτη, Κορτια / Lat. *Corte*
- ▶ title Mer. *pqrtr* “great prince (?)” / Eg. transcr. *pkrtr*
- ▶ title Mer. *hohonete* (REM 1183) / Dem. transcr. *hḥn3tj*
- ▶ title Eg. *wpuṭj* “envoy” / Mer. *apote*

A number of equivalences of the sign that is traditionally transcribed as *d* have made their appearance. Influenced by an increased knowledge of the correspondences, the best phonetic analysis has been presented by Macadam (1949:94, 110 and note a). He later writes:

The hieroglyph representing an eye and transcribed by convention with *d* appears to be a consonant partaking of the sounds of both R and D, probably a retroflex letter in which the tip of the tongue is turned behind the teeth-ridge and flaps forward over it. It occurs in other African languages, for example in Bedauye, the language of present inhabitants of the Eastern Desert. (Macadam 1966:52 and note 26)

The grapheme *d* now corresponds with the phonetic IPA notation [ɖ]. It concerns a retroflex where the apex, that is, the tip of the tongue, curves toward the palate and returns again, hence its name. This type of apical is mostly known for languages in India but is also widely found in Africa, particularly in

Cushitic languages such as Beja, Saho, or 'Afar. This voiced retroflex consonant often sounds like a variety of /r/ to the untrained ear. Accordingly, Egyptian and Greek transcriptions are found with *r* or *ρ*, respectively. For the Meroites, the *d* and *r* are phonologically distinct and no confusion is found in the writing of these sounds. Hence the loanwords from Egyptian that originally had *r*, for example, the names of the deities *Ar* "Horus" and *Atri* "Hathor" are never written with *d* but with *r*. It is noted that Old Nubian shows an alternation between *d* and *r* that is perhaps a relic of Meroitic (cf. Browne 1989a:5).

The preceding interpretation of the apical is now widely accepted. There is a particular group of transcriptions that was not mentioned previously, which shows a regular phonological pattern. These transcriptions of Meroitic words, often place-names, by Pliny the Elder, who goes back to the now-lost Greek manuscripts of Bion of Soles (third century BC, author of the *Aethiopica*) and King Juba II of Mauretania (around 25 BC), are part of itineraries with place-names that may have been locally collected. They are, therefore, of a different kind than the Egyptian or Greek Egyptian transcriptions. This particular group shows that /d/ in Meroitic is consistently transcribed as *-nd-* by Bion and *-d-* by Juba. This is possibly explained by the regional origin of the guides or by the transition of the retroflex Meroitic sound to a more alveolar and ultimately to a prenasalized sound.

However, the retroflex character of the Meroitic apical does not explain the earlier correspondences with Egyptian *nt*, *nd*, or with Greek *νδ*, *ντ* representing a Meroitic *d*. This problem is elsewhere discussed from the perspective of the writing system and has led to the conclusion that it is within Meroitic itself that the key to this problem is to be found and not in the ways of transcription used by the Egyptians or the Greeks. Three solutions remain:

- (a) The phenomenon is entirely phonological: There exist in Meroitic a series of prenasalized consonants. The nasal part is not marked by the Meroites, who write the prenasalized consonant as a simple consonant. This is the theory of Zyhlarz (1930) and Hofmann (1981a).
- (b) Meroitic has nasal vowels that are written with conventional vowel signs without indicating their difference. Egyptian and Greek approximate those nasal vowels by adding an *n*. This is the theory of Macadam (1950).
- (c) The phenomenon is purely graphic: When there is a succession of nasal and consonant, the nasal is not written in Meroitic, but it is still written in Egyptian and Greek. This is the theory of Hintze (1987).

Solution (c) has the advantage of simplicity. It does not complicate the Meroitic phonology by adding a series of prenasalized consonants, which

are largely absent in Nilo-Saharan languages, or a series of nasalized vowels, which would suggest an inconsistent rendering of nasal vowels in a syllabary. The phenomenon of eliminating the nasal grapheme is found in other syllabaries as well. The convention of elision appears not to be systematically respected so that one still finds *Akine-te* in Lower Nubia, corresponding most likely with a phonetic realization of [akint (ə)]. However, the Greek transcription of κανδάκη for the original Meroitic *kdke* seems to present a problem. One expects the [d] to be transcribed as -ρ- and eventually as -δρ- after a nasal (*κανδράκη). It is unlikely that the retroflex became an apico-dental or apico-alveolar consonant in this process since retroflex consonants tend to do the opposite and influence the consonants around them instead. The best explanation is that retroflex [d] is just the phonetic realization of /d/ in intervocalic position. Where /d/ followed a consonant, as in *kdke*/ κανδάκη, it was not retroflex and was plainly pronounced [d]. This was also the case for *d* at the beginning of words. Although there is no transcription of Meroitic terms with an initial *d* known from ancient languages, the legacy of Meroitic in modern Nubian place-names is conclusive: *Adomn* is now Arminna, *Pedeme* is Ibrim, and *Dor* is Der. In the two former names, the intervocalic *d* became an /r/. In the latter, the initial *d* is kept as an alveolar /d/.

c. Velars: Labialized Velars

Since Griffith, the two graphemes have been interpreted as velar stops: *k* and *q*. The following correspondences serve as examples:

Mer. *k* / Eg. *k*, *g* / Gr. *κ*, *χ* / Lat. *c*, [c] in *x*

- ▶ personal name Mer. *Tenekitnide* / Dem. transcr. *3tngytnry3*
- ▶ personal name Mer. *Bekemete* / Dem. transcr. *Bkmty*
- ▶ personal name Mer. *Arikxor* / Eg. transcr. *Írknhrr*
- ▶ personal name Eg. *T3 B(j)k(.t)* “female falcon” (Gr. Τβηχις) / Mer. *Tebiki*
- ▶ place-name Mer. *Akine* “Lower Nubia” / Dem. *3kjny* / Lat. *Acina*
- ▶ place-name Mer. *Tolkte* “Naga” / Eg. transcr. *Tw(i)lkt*
- ▶ title Lat. *Caesar*, Gr. Καίσαρ / Dem. *Gysr(s)* / Mer. *Kisri*

Mer. *q* / Eg. *k*, *q* / Gr. *χ*, *κ*, *γ* / Lat. *c*, *ch*

- ▶ personal name Mer. *Tqoridemni* / Dem. transcr. *Tqrrmn*
- ▶ place-name Dem. *P(r)-3lq* “Philae” / Mer. *Pilqe*, *Pileqe*
- ▶ place-name Mer. *Qerbe* (location is contested) / Lat. *Corambim*, *Curambeta* (?)

- ▶ place-name Eg. *B3qi*, *B3k.t* / Mer. *Beqe*, *Boq-* / Gr. transcr. Ἀβουγκίς, Lat. *Bocchis*
- ▶ title Mer. *qore* “sovereign” / Dem. transcr. *kwr*
- ▶ title Mer. *pqrtr* “crown prince” / Eg. transcr. *pkrtr*
- ▶ title Mer. *qorene* “royal scribe (?)” / Dem. transcr. *qrnj*, *qwrnj*, *qrnj3*

These two phonemes have been interpreted in a number of ways. Not surprisingly, they have been analyzed in the same way as the previous stops, meaning as part of a contrast of voice: *k* [k] and *q* [g]. Certain variations of spelling do not support this analysis, and Heyler (1964, 1965) has pointed at a curious alternation between *q* and *w*. For instance, there is *wettri* for writing Osiris, mostly found in the northern part of the kingdom, alternating with *qettri* as it is found in the south. Böhm (1986:115,118,119, note 9, 1987:7) has then proposed a labialized velar [k^w] for the written *q*.

This latter suggestion is supported by strong arguments. First, the origin of the signs suggests that the cursive form of *q* was derived, via Demotic, from the Egyptian 𓆎 *k3*, vocalized as [ku]. This choice of sign is explained by the uvular quality of the occlusive, close to the realization of [k^w], where the back of the tongue reaches the back of the velum.

Second, the Egyptian transcription often used *k* for the Meroitic *q*. The word *qore* “king” is transcribed *kwr*, with an indication of a labiovelar *w*.

Third, the Meroitic writing system itself provides support. Sequences of two consonants are created by having the first consonant sign followed by the vowel sign for *e*. This vowel sound may then be deleted in reading. A succession of /bilabial + velar/ or /velar + bilabial/ consonants appears absent in Meroitic writing. In the rare case where there seems to be an exception, it is possible to prove that the sign *e* that is transcribed is actually a vowel that needs to be realized. Similarly, the vowel *o* (= [u]) is never preceded by the grapheme *k*; it is *q* that is used if a velar occlusive is labialized by a vowel that follows. Although less systematically, there is also a tendency to write *q* where the *k* is preceded by an *o*.

Finally, the alternation between the graphemes for *o* and *e* is particularly frequent in words where these vowels precede or follow the phoneme /q/, for instance: *aqebese* / *aqobese* “their,” *Pilqe* / *Pilqo* “Philae,” *qowi* / *qewi* “this one is,” and *Beqe* / *Boq[e]* (place-name). The variants with *e* are probably explained by haplography of the labiovelar quality, which is sufficiently marked in the eyes of the Meroites by the use of the labialized velar *q* [k^w].

It will become clear later that this labialized character is also found among the Meroitic fricatives and makes a full set of labialized velars. A number of African languages have such labialized velars, in particular the

Table 4.1: The Meroitic stops

	Bilabial	Apical	Velar	Labialized velar
Voiced	b, p/ [b]	d/ [d] – [d̥]/	–	–
Voiceless	–	t/ [t]	k/ [k]	q/ [kʷ]

Nilo-Saharan ones but also Cushitic languages (among others Beja and Iraqw) and Bantu languages (such as Swahili). The existence of a series of labialized velars in Meroitic appears mostly an areal feature among otherwise different and even unrelated languages (see also Greenberg 1983).

The absence of a voiceless bilabial as well as a voiced velar is common in African languages (see also Creissels 1994:114). As is shown here (see Table 4.1), the system of the Meroitic stops is not particularly original in the context of African languages.

2. Fricatives

a. Apical /s/

Meroitic has only one apical fricative, namely, /s/. An early suggestion by Griffith (1911a:15,22) has /s/, written 𐎓 (which is *se*), and /š/, written 𐎔 (which is *s*). Although this practice has continued among some Meroiticists, it is clear that, particularly in transcriptions from Greek, the Meroites used the sign for *s* before a vowel and the sign *se* before a consonant or in final position. Only the name “Kush” is an exception to this rule. The latter is most likely an evolution of the Egyptian transcription taken from the Middle Kingdom, and the Greek Χους pays tribute to this. The difference between the two signs is, therefore, only one of writing and does not represent any phonological distinction.

On the other hand, the transcription of Meroitic /s/ in Egyptian is not consistent. Both *s* and *š* are found, so that we have Kush in the Middle Kingdom written as *K3š* or *K3ś*. In syllabic writing as part of the supplementary chapters in the Book of the Dead, it is *ka-sa* or *ka-ša*, and in the Napatan list of names, it is also as much *K3s* as *K3š*. The phonetic value is most likely somewhere between these two.

Mer. *s* / Eg. *s*, *š*, Coptic *c*, *ϣ*, *z* / Gr. -σ, [-σ] in ψ, τ (?) / Lat. [-s] in x

- ▶ name of a deity Eg. *Wsir* “Osiris” (Gr. Ὀσίρις) / Mer. *Asori*
- ▶ name of a deity Eg. *Īs*. *t* “Isis” (Gr. Ἴσις, Coptic ⲙⲥⲉ) / Mer. *Wos*
- ▶ name of a deity Eg. *Hnsw*, Gr. Χόνς “Khonsu” / Mer. *Xs* (?)

- ▶ personal name Dem. *T3-špšj.t* “the noble one” (Gr. Τσεψις, Σεψις) / Mer. *Sipesiye*
- ▶ personal name Dem. *Ssn* / Mer. *Ssno*
- ▶ personal name Mer. *Snpte(-li)* / Dem. transcr. *Snptj*
- ▶ personal name Dem. *Pa-Ġs.t* “the one (M) of Isis” (Gr. Παησις) / Mer. *Pyesi*
- ▶ personal name Dem. *Ta-Ġs.t* “the one (F) of Isis,” (Gr. Θαησις) / Mer. transcr. *Tyesi*
- ▶ personal name Dem. *Ġs-mt*, Gr. Σμιθις / Mer. *Semeti*
- ▶ personal name Lat. *Maximinus* / Mer. transcr. *Mkesemene*
- ▶ place-name Eg. *K3š* “Kush” (Gr. Χους, -κυς-, -γυς-) / Mer. *Qes*
- ▶ place-name Eg. *(Pr-)Nbs* “Pnubs” (Gr. Πνούψ, Lat. *Nups*) / Mer. *-Nbse*
- ▶ place-name Mer. *Phrse* “Faras” / Gr. transcr. Παχωρας, Coptic παχωρας
- ▶ place-name Mer. *Sye* “Sai” / Middle Eg. *š3^c.t* (Coptic Ⲛⲁⲙ)
- ▶ place-name Mer. *Selele* “Shellal” / Gr. transcr. Τελληλις (inscription of King Silko)
- ▶ title Lat. *Caesar* “Caesar” Gr. Καισαρ / Dem. *Gysr(s)* / Mer. *Kisri*
- ▶ title Eg. *p3-mr-mš^c* “general” (Gr. [π]λεμεισα) / Mer. *pelmos*
- ▶ title Eg. *p3-mr-šn* “administrator of the temple” (Gr. [π]λεσωνις) / Mer. *plsn*
- ▶ title Mer. *peseto* “viceroys” / Gr. transcr. ψεντης, Eg. *p(3) snlj*

The name of Caesar is transcribed in Meroitic as *Kisri*, resembling /kaisari/. *Pelmos*, “general,” is rendered as /bəlamusa/, from Late Egyptian *p-lmš^c*. These two transcriptions show that the Meroites did not make the distinction between [s] of Caesar, from Greek, and the [ʃ] from Late Egyptian. They had only one phoneme /s/ while [ʃ] seemed to be in free variation.

It is likely that the Meroitic /s/ has palatal qualities and was rendered as [ç]. The acoustic ambiguity that palatal consonants may cause to Egyptian ears explains the variation in transcription. A further argument for its palatal quality will appear when discussing Griffith’s law that changes the sequence /s/ + /l/ to *t* in written Meroitic.

b. Velars

The velar fricatives /x/ and /h/ have a less certain interpretation because of the limited number of transcribed examples in which they occur. It is the logic of phonology that now presents the basis of the hypotheses. There are only five known transcriptions for these two phonemes:

Mer. *x* / Eg. *ḫ* / Gr. *χ*

- ▶ personal name Mer. *Arikxror* / Eg. transcr. *īrknḫrr*
- ▶ name of a deity Eg. *Ḫnsw*, Gr. *Χόνς* “Khonsu” / Mer. *Xs* (?)

Mer. *h* / Eg. *ḥ* / Gr. *χ*

- ▶ personal name Eg. *P(3)-ḥm* “Pachomius” (Coptic *παχων*), Gr. *Παχουμς* / Mer. *Phome*, *Pheme*
- ▶ place-name Mer. *Phrse* “Faras” / Gr. transcr. *Παχωρας*, Coptic *παχωρας*
- ▶ title Mer. *hohonete* (unknown responsibility) / Dem. transcr. *ḥḥn3tj*

Griffith assumed the same phonetic values as the parallel ones in Egyptian. Meinhof (1921–1922:2) and later Priebe (1973:tab.Ib) suggested a voiced and voiceless dorsovelar fricative as they proposed for other consonants as well. Similarly, the interpretation put forward here is an opposition of labialized and nonlabialized, as was proposed for the dorsovelar occlusives *q* and *k*.

The evidence for the opposition with labialization is limited but points in the same direction as the previous discussion of the occlusives.

For the personal name *Phome* (variant *Pheme*) and the place-name *Phrse* referring to the town of “Faras,” the Coptic vowel *ω*, just like the Greek vowel, is a long *o* [o:]. The dorsovelar fricative, preserved as the Coptic *ϣ*, is unavoidably labialized and, therefore, written as *h*. Similar to the case of *q*, the alternate form *-he-* has a neutral vocalic modifier. In other words, the labiovelar quality of the syllable was written with a labialized consonant and that was considered sufficient. In the same way, *Phrse* with a syllable sounding like [xo:] in its Greek and Coptic equivalent is written by the labialized *h*.

There is less evidence from the co-occurrence of these fricatives with other consonants. Their relative absence in combination with other consonants in the Meroitic corpus is possibly explained by a systematic assimilation of these fricatives with adjoining consonants (Hintze 1979:65–67). Their combination with vowels allows the same support for labialization as that found for the stops in two ways:

The alternation *ho/he*, described as haplography with a labiovelar quality for the occlusives, is found in *Phome/Pheme* “Pacome” and *mho/mhe* “abundant.”

The syllable *xo is hardly ever attested. The only occurrence known is from an incoherent text, REM 0124. It is also noted that *hi is not attested either, while the syllable /ha/ is frequent. A hypothesis that

suggests the development of /h/ from a velar fricative toward a labialized velar fricative may explain this phenomenon (see Creissels 1994:112).

It is noted that the writing of labialized consonants is also attested for other writing systems and that the parallel between *k/q* and *x/h* fits well into a phonological system where there is /q/ = [k^w], /h/ = [χ^w], and /w/ = [w]. (See Table 4.2.)

3. Approximants

The term *approximant* is used here as a way to define those consonants that do not constrict the airflow sufficiently to create a fricative sound. They are also called “glides” and “semivowels,” since they appear to be between vowel and consonant phonetically and sometimes even phonologically. The three approximants identified for Meroitic are /l/, /w/, and possibly /y/.

a. Lateral /l/

In contrast with Egyptian, where the phonemic status of /l/ is questionable, the Meroitic instance is not ambiguous. Not only does it have a specific sign, but there are no variants in which /l/ is replaced by another phoneme. The equivalent values in other languages are not easy to find, but the five instances all point in the same direction:

Mer. *l* / Eg. *r/l*, *mr* (= /l/), Dem. *l* / Gr. *λ*

- ▶ place-name Mer. *Tolkte* “Naga” / Eg. transcr. *Tw(i)lkt*
- ▶ place-name Mer. *Selele* “Shellal” / Gr. transcr. Τελληλις
- ▶ place-name Dem. *P(r)-3lq* “Philae” (Gr. Φίλαι) / Mer. *Pilqe*, *Pileqe*
- ▶ title Eg. *p3-mr-mš^c* “general” (Gr. [π]λεμεισα) / Mer. *pelmos*
- ▶ title Eg. *p3-mr-šn* “administrator of the temple” (Gr. [π]λεσωνις) / Mer. *plsn*

Unlike Old Nubian, where this phoneme is found in initial position in loanwords only, some words in Meroitic start with *l-*, in particular *lh* “large” (Griffith 1911a:15). It should be noted that the majority of these instances are proper names. On the other hand, following the manner of Old Nubian, many forms of determinants contain an initial *l-*, particularly because they seem to be derived from a determinant *-l*.

It is noted that /l/ is generally deleted when following /r/, but assimilated with a preceding /n/.

b. Palatal /y/ (?)

Because of its affinity with the vowel /i/, there are few languages in which this palatal articulation is absent, but it does not exist in Nubian and other NES languages. Significantly, the correspondences of Meroitic *y* with other languages are not numerous and concern only the final syllable *-ye*, which usually has a vocalic value [i]. In the list that follows, the *y* is not featured as a graphic “filler of the void,” as is found in the personal names *Pyesi* (Gr. Παησις) and *Tyesi* (Gr. Θαησις) and in most of its occurrences when followed by *i* and *e* (see Chapter 2). Its consonantal status is less questionable when it is followed by an inherent vowel /a/, but this combination is rare.

Mer. *y* / Eg., Dem. *y*, *j* / Gr *ει*, *ι*

- ▶ personal name Mer. *B(e)rtoye* “Abratoye” / Dem. transcr. *3brtj*, Gr. Ἀβρατοεις
- ▶ personal name Mer. *Wyekiye* / Dem. transcr. *Wygy(3)*, *Wyngy3*, *Wʹyky*
- ▶ personal name Dem. *t3-špšj.t* “the noble one” (Gr. Τσεψις, Σεψις) / Mer. *Sipesiye*
- ▶ place-name Eg. *Ḥ(w).t-Tiy* “temple of Tiye” / place-name Mer. *Atiye* “Sedeinga”

c. Labiovelar /w/

The labiovelar approximant /w/ has the same articulation as the vowel /u/, and the graphemes transcribed as *w* and *o* have already shown great affinity. The phoneme /w/ fits with a group of labialized velar consonants. There is a dialectal variation between /w/ and the phoneme /q/ (= [kʷ]), which is found in some words in the north of the kingdom.

The equivalent values in Egyptian and Greek leave no doubt about the pronunciation of this phoneme.

Mer. *w* / Eg. *w3*, Dem. *w*, Coptic *ⲱ* / Gr. *ὦ*

- ▶ place-name middle-Mer. *Medewi* “Meroe” / Ptol. Eg. *Mi-r-w3-i*, Dem. *Mrw.t*, Gr. Μερώνη
- ▶ place-name late-Mer. *Bedewi* “Meroe” / Coptic transcr. *περοϋε*
- ▶ personal name Mer. *Wyekiye* / Dem. transcr. *Wygy(3)*, *Wyngy3*, *Wʹyky*
- ▶ personal name Mer. *Mntwwi* / Dem. transcr. *Mntwj*
- ▶ noun Eg. *t(3)-wšt.t* “adoration” (Coptic *ⲧ-ⲟϣⲱⲧⲉ*) / Mer. *tewiseti*

4. Trill /r/

The category of trills is added to the approximants for reasons of convenience. There is only one phoneme in this category, the apical /r/. It is, however, a consonant that does not have examples of replacement by another phoneme. In particular, the present data do not show any alternation with /l/, contrary to numerous languages, including Old Nubian, where this is more common.

The equivalent sounds found in transcriptions of other languages are numerous and in agreement. They consistently show an /r/ even though the realization of this phoneme differs from one language to the other and was probably different in Egyptian, Latin, and Greek.

Mer. *r* / Eg. *r*, Coptic *p* / Gr. *ρ*, Lat. *r*

- ▶ personal name Mer. Mnitore / Eg. transcr. Ḥmn-t3{.wy}ry(.t), Ḥmn-dr(.t)-y (.t)
- ▶ personal name Mer. Arikxror / Eg. transcr. Ḥrknḥrr
- ▶ personal name Mer. Tqoridemni / Dem. transcr. Tqrrmn
- ▶ personal name Mer. B(e)rtoye “Abratoye” / Dem. transcr. 3brtj, Gr. Ἀβρατοεις
- ▶ name of a deity Eg. Wsir “Osiris” (Gr. Ὡσιρις, Coptic ⲟⲩⲣⲓⲣⲉ) / Mer. Asori
- ▶ name of a deity Eg. Ḥ.t-Ḥr “Hathor,” Gr. Ἄθυρ / name of deity Mer. Atri
- ▶ name of a deity Eg. Ḥr, Gr. Ὡρος, Ἄρ- “Horus” / Mer. Ar
- ▶ name of a deity Eg. Ḥr-nd-īt = f, Gr. Ἄρενδωτης “Harendotes” / Mer. Arette
- ▶ place-name Mer. Phrse “Faras” / Gr. transcr. Παχωρας, Coptic παχωρασ
- ▶ place-name Mer. Aborepi “Musawwarat” / Eg. transcr. *Ḥbrp
- ▶ place-name Mer. Qerbe (disputed location) / Lat. Corambim, Curambeta (?)
- ▶ place-name Lat. Roma “Rome,” Gr. Ῥώμη / Dem. Hrwmj / Mer. Arome
- ▶ place-name Mer. Qoreti “Qurta” / Dem. Qrt, Gr. Κορτη, Κορτια / Lat. Corte
- ▶ title Lat. Caesar “Caesar,” Gr. Καισαρ / Dem. Gysr(s) / Mer. Kisri
- ▶ title Mer. qore “sovereign” / Dem. transcr. kwr
- ▶ title Mer. pqrtr “crown prince” / Eg. transcr. pkrtr
- ▶ title Mer. qorene “royal scribe (?)” / Dem. transcr. qrnj, qwrnj, qrnj3
- ▶ title Mer. akroro “prince (?)” / Dem. transcr. 3krri

- title Eg. p3-rt “agent” “temple bursar” (Coptic **ⲡⲣⲏⲧ**) / Mer. *perite*
- title Mer. *arebetke* (fiscal position) / Dem. *3rbtg^cye, 3rbtngy^c*

As in Nubian and all the NES languages, the phoneme /r/ cannot be found in initial position of a word. Although loanwords may begin with this letter, it is systematically preceded by an *a-* in the script, which probably transcribes a schwa [ə]. It is likely that the *A-* in *Arome* “Rome” or “Roman Empire” is not, as thought by Griffith and Zyhlarz, like a transcription of *H-* of the Demotic version *Hrwmj*, which is used to reproduce the aspiration of an initial rho in Greek.

5. Nasals

Meroitic seems to have two basic nasals: /m/ and /n/. As will be shown, there may possibly be another nasal, or even two.

a. Bilabial /m/

The nasal /m/ was realized as a bilabial [m], for which the parallels in Egyptian, Greek, and Latin are consistent in their transcription.

Mer. *m* / Eg. *m* / Gr. *μ* / Lat. *m*

- personal name Eg. *P(3)-ḥm* (Coptic **ⲡⲁⲗⲱⲙ**), Gr. **Παχουμης** / Mer. *Phome, PHEME*
- personal name Dem. *Īs-mt*, Gr. **Σμθις** / Mer. *Semeti*
- personal name Lat. *Maximinus* / Mer. transcr. *Mkesemene*
- name of a deity Eg. *Īmn*, Gr. **Ἄμουν** / Mer. *Amni*
- name of a deity Eg. *Īmn, (-m-)Īp.t* “Amun of Luxor” (Gr. **Ἀμυνωφιδης**) / Mer. *Amnp*
- name of a deity Mer. *Apedemk* / Eg. transcr. *Īprmk*
- place-name Mer. *Adomn* “Arminna” (Eg. **ʿ3-d-wmn** ?) / Lat. *Andumana* (?)
- place-name Mer. *Amod* undetermined location / Lat. *Amoda*
- place-name Lat. *Roma* “Rome,” Gr. **Ῥώμη** / Dem. *Hrwmj* / Mer. *Arome*

It is possible that the phoneme /m/ was not written before /b/, following the example of /n/ before apicals. This can be illustrated by the Meroitic place-name *Qerbe*, a place in a location that is still unclear, but that corresponds, perhaps, with the names of the places *Corambim* (in the itinerary by Juba) and *Curambeta* (after the work of Bion), both referring to the work of Pliny the Elder.

There are a few variants in which *b* is substituted by *m*. This is notably the case in the late Meroitic *Bedewi* “Meroe” and *beloloke* (an elevated sacred title) versus the middle Meroitic *Medewi* and *ameloloke*. This evolution cannot be explained for the time being. One also finds *xblo*l in the formula of benediction C in REM 0277, where all other epitaphs read *xmlo*l. This alternation may be part of a syntactic assimilation (Priese 1979:125) but has remained little understood.

b. Apical /n/ and Possible Other Nasals

The nasal phoneme /n/ has two written forms. It is written *n* before the vowels /a/, /i/, and /u/, but *ne* in syllables with vowel /e/ and /ə/ or as an independent consonant /n/, at the end of a word. It is not written, with few exceptions, when it corresponds to a consonant that precedes the graphemes *x*, *k*, *d*, *t*, and probably *h*. The equivalents show a consistent parallel between Meroitic /n/ and /n/ in Egyptian, Greek, and Latin.

Mer. *n*, *ne* / Eg. *n* / Gr. *ν* / Lat. *n*

- ▶ personal name Dem. *Ssn* / Mer. *Ssno*
- ▶ personal name Lat. *Maximinus* / Mer. transcr. *Mkesemene*
- ▶ name of a deity Eg. *Īmn*, Gr. Ἄμμον / Mer. *Amni*
- ▶ name of a deity Eg. *Īmn(-m-)Īp.t* “Amun of Luxor” (Gr. Ἀμυνωφίς) / Mer. *Amnp*
- ▶ place-name Eg. (*Pr-*)*Nbs* “Pnubs” (Gr. Πνούψ, Lat. *Nups*) / Mer. *-Nbse*
- ▶ place-name Mer. *Npte* “Napata” / Eg. transcr. *Npt*, Gr. Νάπατα
- ▶ place-name Mer. *Akine* Lower Nubia / Dem. *3kjny* / Lat. *Acina*
- ▶ place-name Mer. *Adomn* “Arminna” (Eg. ³*d-wmn* ?) / Lat. *Andumana* (?)
- ▶ title Eg. *p3-mr-šn* “administrator of the temple” (Gr. [π]λεσωνίς) / Mer. *plsn*
- ▶ title Eg. *hm-ntr* “prophet” (Coptic ⲭⲟⲛⲧ) / Mer. *ant* “priest”

Absent grapheme in Mer. / Eg. *n* / Gr. *ν*, Lat. *n*

- ▶ personal name Mer. *Ariksror* / Eg. transcr. *Īrknḥrr*
- ▶ name of a deity Eg. *Hr-nd-it=f*, Gr. Ἄρενδωτης “Harendotes” / Mer. *Arette*
- ▶ name of a deity Eg. *Hnsw*, Gr. Χόνς “Khonsu” / Mer. *Xs* (?)
- ▶ personal name Mer. *Wyekiye* / Dem. transcr. *Wyngy3*
- ▶ title Mer. *kdke*, *ktke* “Candace” / Eg. *kntiky*, Gr. κανδάκη
- ▶ title Mer. *peseto* “viceroys” / Gr. transcr. ψεντης, Eg. *p sj-nsj*
- ▶ title Mer. *arebetke* (fiscal position) / Dem. *3rbtngy*³
- ▶ title Eg. *hm-ntr* “prophet,” Coptic ⲭⲟⲛⲧ / Mer. *at* “prophet” (late variant of *ant*)

Table 4.2: The Meroitic phonological consonant system

		Bilabial	Apical	Palatal	Velar	Labialized velar
Stops	voiced	/p/, /b/ [b]	/d/ [d] ~ [d̪]			
	voiceless		/t/ [t]		/k/ [k]	/q/ [kʷ]
fricatives (voiceless)			/s/ [ç]		/x/ [χ]	/h/ [χʷ]
approximants (voiced)			/l/ [l]	/y/ [j](?)		/w/ [w]
trills (voiced)			/r/ [r]			
nasals (voiced)		/m/ [m]	/n/ [n]			

The sign for *ne* has been read and transcribed as *ñ*, a palatalized nasal, by Griffith (1911a:14), on the basis of evidence from Demotic transcriptions and the presence of this sound in Old Nubian. The sign for *ne* was, however, never followed by a vowel, while the sign for *n* was never followed by the vowel *e*. Despite these objections and his later agreement with a transcription of *ne* (Griffith 1916b:117), the palatal transcriptions persisted until at least the work of Hintze. There remains, however, a comparison of the Meroitic sign for *ne* with the Old Nubian palatal nasal in both its writing system and language. The possible and likely retroflex realization of the Meroitic nasal apical is at least acoustically close to a palatal nasal, where the dorsum rather than the tip of the tongue reaches the palatum. It is, therefore, not surprising that the first writers of Old Nubian recycled the Meroitic sign that transcribed a retroflex for one that needed to transcribe a palatal sound.

There has been a suggestion that Meroitic, just like Old Nubian, possessed a sign for a velar nasal or that the phoneme /n/ has velar realization. It suffices to state that neither hypothesis yet has much support.

B. THE VOWEL SYSTEM

Contrary to the consonants, Meroitic vowels are not easily classified into a coherent system, whether it is with the help of the transcription or of the phonological theory. Griffith summarized it as follows (1916b:118, 121):

The notation of vowels in Meroitic ... and the actual values of the vowel signs are questions which still bristle with difficulties.... Even after allowing for the imperfection of the evidence, the uses of

the vowel signs in Meroitic seem curiously elusive and capricious. Perhaps the difficulties lie partly in the mixture of evidence from different ages.

...

It seems impossible to make any consistent scheme for the vowels. If the vocalisation of a word is known some kind of explanation of the reasons for the use of the vowel signs in writing it can be given, but it is impossible to judge how a word was vocalised from the evidence of the Meroitic writing alone.

There are a number of confounding problems, which mostly relate to the absence or inconsistent rendering of vowels in Egyptian and Demotic, where most of the equivalent words can be found for analysis. Most Nilo-Saharan languages, such as Meroitic, have vowel variations that play a morphological role and thereby complicate the analysis.

These problems cannot be overcome entirely since even the fully vocalized Greek and Latin equivalents are too small in number and too limited in precision. Instead, only a few new hypotheses are put forward, mainly where it concerns the grapheme *e*, the evolution of the internal vowel /a/, and the use of certain variants in the context of labialized velars.

1. The Phoneme /a/

This is by far the most frequent vowel, constituting nearly 50 percent of the vocalic phonemes found in the known “lexicon.” That explains why this vowel was chosen as the “inherent vowel” (i.e., a default vowel in the absence of a specification) in the Meroitic syllabic writing system.

Within a syllable or at the end of a syllable, this vowel is not marked by any specific sign. In word initial position, it is represented by a sign that is commonly transliterated as *a* and that also corresponds to /a/ in most corresponding words in other languages. So there is Greek α for Meroitic (A) *b(e)rtoye* “Abratoye,” *Arette* “Harendotes,” *Atri* “Hathor,” *Amni* “Amun,” and the vowel *a* in Latin for the Meroitic place-names *Akine*, *Amod*, and perhaps *Adomn* if the equivalent Latin word proposed by Priese is correct.

Within the syllable, the value of the inherent vowel /a/ is confirmed by Greek versions of Meroitic names with *a* or with Egyptian loanwords in Meroitic. For example, the personal names (A) *b(e)rtoye*, *Pyesi*, *Tyesi*, *Phome* “Pacomius”; the titles *Kisri* “Caesar,” *ktke* “Candace (Queen),” *pelmos* “general”; the place-names *Pilqe* “Philae,” *Npte* “Napata,” *Phrse*, *Qerbe*, *Adomn* (?), *Amod*; and the name *Mkesemene* “Maximin.” The exceptions

are explained by a phonetic evolution in Egyptian. It concerns the words that the Meroitic language had borrowed from Egyptian before the end of the thirteenth century, at the time when the Greek transcriptions corresponded to the Demotic pronunciation. Meroitic has an /a/ where Greek has ο [o], ω [ɔ:], ου [o:], or even υ [u]. The following correspondences are found:

- ▶ Mer. *Ar* (= /ara/) / Gr. Ὠρος “Horus”
- ▶ Mer. *Xs* (= /xansa/) / Gr. Χόνς “Khonsu”
- ▶ Mer. *Arette* (= /arentate/) / Gr. Ἀρενδωτης “Harendotes”
- ▶ Mer. *Amni* (= /amani/) / Gr. Ἄμμων, Ἄμμων “Amun”
- ▶ Mer. *Atri* (= /atari/) / Gr. Ἄθυρ “Hathor”
- ▶ Mer. *Mt* “Mout (?)” (= /mata/) / Gr. Μουθ
- ▶ Mer. *-nbs(e)* (= /nabas(a)/) / Gr. Πνούψ “Pnubs” (place-name)
- ▶ Mer. *plsn* (= /balasana/) / Gr. [π]λεσωνις “administrator of the temple”

Similarly, in final position, the Meroites sometimes write /a/ where in Demotic, according to the Greek and Coptic records, there is a short /e/ or a mute vowel:

- ▶ Mer. *Wos* (= /usa/) / Gr. Ἴσις/ Coptic ⲙⲉⲥⲉ “Isis”
- ▶ Mer. *Qes* (= /qusa/) / Gr. Χους “Kush”
- ▶ Mer. *Xs* (= /xansa/) / Gr. Χόνς “Khonsu”

In some positions the vowel /a/ is relatively unstable and may transform into an *e*, a sign that probably represents a schwa /ə/. In the presently known “lexicon” there are about forty words in which /a/ alternates with *e*. It is often difficult to find the corresponding periods, but for some words such as *pesto* / *peseto* “viceroy,” it is possible to date the change to the first century AD with the help of paleography. It is likely that this phenomenon was related to or the result of a change in tonal structure or stress. For example, the initial /a/ in Amun is, in most cases, present in the general corpus of Meroitic texts when the word has no suffix (sixty occurrences of *Amni* as opposed to ten of *Mni*). If this name is followed by a genitive postposition *-se*, this proportion of occurrences is inverted: There are forty-three occurrences written as *Mni-se* versus six as *Amni-se*. It seems plausible that this postposition, which is hardly ever detached from its root by way of a separator sign in written Meroitic, modified the prosodic structure of the lexeme, contributing to the elimination of the initial /a/, which had undoubtedly already become a schwa.

This mutation of /a/ and *e* is likely to have increased over time. Indeed, when one corpus of texts from the first century BC (the Taneyidamani stela

REM 1044) is compared with one from the third century AD (texts from Qasr Ibrim REM 1182, 1183, 1232, 1233), it shows that the relative frequency of these two vowels evolved in the manner suggested by the preceding observations: The frequency of /a/ interchanging with *e* (from a total of 100 percent) went from 62/38 in REM 1044 to 52/48 in Qasr Ibrim. Later stelae present a similar number of 53/47, and it is clearly not a phenomenon restricted to the north. Writing systems adjust only slowly so that in late Meroitic texts the “inherent” vowel is either /a/ or /ə/.

2. The Schwa /ə/

The neutral vowel /ə/ is generally written by the grapheme *e*. Griffith (1911a:9) already noted that in some loanwords, the sign *e* transcribed a particularly weak vowel. Later (Griffith 1916b:119–121) he noted that it corresponded well with an absent vowel and in other cases with the Greek *η*, which is a long vowel /ɛ:/, an ancient value of this Greek letter that was preserved since it was often pronounced [i:] as early as the third century BC (Clarysse & Van der Veken 1983:148, Pestman 1993:488). In later Egyptian it is *e* and in Coptic *ⲙ*.

The presence of a schwa /ə/ has been suggested and made plausible by successive authors. Since the value /i/ is rendered as *i*, and /u/ is *o*, and the /a/ is not written except in word initial position, only the sign *e* can correspond with /ə/.

It is suggested here, following the extant literature, that the original /a/ became a schwa /ə/ prior to becoming silent in some cases. The silent quality of the letter *e* is found in numerous examples such as the Meroitic personal names *Tebiki* / Gr. Τβηχις, Mer. *Bertoye* / Gr. Ἀβρατοεις, Mer. *Sipesiye* / Gr. Σεψις, Mer. *Semeti* / Gr. Σμιθις, Lat. *Maximinus* / Mer. *Mkesemene*, Mer. *peseto* “viceroys” / Gr. ψεντης, and place-names *Phrse* / Gr. Παχωρας, “Faras,” Mer. *Pedeme* / Gr. Πριμις “Qasr Ibrim,” Mer. *Qoreti* / Gr. Κορτη “Qurta.”

3. The Phoneme /e/

There are multiple correspondences in which Meroitic *e* corresponds with Greek *η* or *ι* where a schwa is not a likely transcription: Mer. *Beke* / Gr. Ββηχις, Mer. *Pyesi* / Gr. Πασις, Mer. *Semeti* / Gr. Σμιθις, Mer. *Tyesi* / Gr. Θασις, Mer. *Arome* / Gr. Ῥώμη “Rome,” Mer. *Pedeme* / Πριμις, Πρημις “Qasr Ibrim,” Mer. *Selele* / Τεληλις “Shellal,” Mer. *ktke* / Gr. κανδάκη “Candace.”

One part of this correspondence concerns the Greek ending -ις, which is added systematically to final consonants in Egyptian words to provide them with a basis for declension.

In other cases, Meroitic /e/ seems to have a variety of phonetic realizations. For instance, *Pedeme* “Qasr Ibrim” has a closed vowel ι [i:] in the transcription Πριμις, but a semiclosed vowel η [ɛ:] in the alternative transcription Πρημις. The alternation between these vowels as well as the vowel length can be explained by the peculiarities of the Greek language of that time (cf. Pestman 1993:485,488), but they do not relate to a schwa.

In Meroitic there are also alternations in spelling between *i* and *e*, for instance, the titles *xlbine/xlbene*, *perite/pirite*, *tqi/tqe*, *womnise-lh/womnese-lh* and the place-names *Bedewi/Bedewe* “Meroe,” *Pilqe/Pelqe* “Philae,” and so on. This variation is partly explained by the phonological structure of the vocalic system, as will be shown later, but it shows once again that the grapheme *e* is not just a schwa, as has been suggested by previous scholars such as Hintze.

The value of the grapheme /e/ should be reconsidered: It represents two phonemes, /e/ and /ə/, the latter of which can be realized in two ways: as a central vowel [ə] or simply the absence of a vowel.

4. The Phoneme /i/

This phoneme creates fewer problems than the preceding vowels and generally corresponds consistently with the Greek ι or the Latin *i* in the known equivalent words. For instance, Meroitic *Asori* / Gr. Ὀσίρις “Osiris” (Coptic ⲟⲩⲣⲓⲥ), Meroitic *Akine* / Lat. *Acina*, an eponymous locality in Lower Nubia, Meroitic *Pilqe* / Gr. Φίλαι “Philae.” Not surprisingly, there are also Greek transcriptions with η in two place-names: Mer. *Medewi* / Gr. Μεδών and Mer. *Qoreti* / Gr. Κορτη (Lat. *Corte*). As explained previously, /i/ and /e/ may alternate in certain forms, but they are different phonemes, and their alternation in transcriptions does not necessarily indicate that their pronunciation is confused.

A surprising alternation is the name of the god *Wos* “Isis” with *Wis*. It seems as if the phonemes /i/ and /u/ (written *o*) were interchangeable. In fact, *Wos* probably was realized as [u:ɕa] and originally may have transcribed an older Middle Egyptian loanword, perhaps in a dialectal form. It seems possible that the initial [u:] has evolved under certain conditions into [wi] through an articulatory process known in other languages. The novel form, undoubtedly, corresponded better with the Meroitic phonology and may have coexisted with the older and etymologically conservative alternative. There is probably no phonological ambiguity between the sounds represented by the graphemes *o* and *i* in Meroitic, although

there remain some other unexplained alternations of *o* / *i* elsewhere (see Hofmann 1981a:43).

5. The Phoneme /u/

The existence of back vowels in Meroitic, such as /o/ or /u/, has been a longtime source of debate. The conclusive study by Hintze (1973b:332–333) on the vowel system showed convincingly that the hieroglyphic signs ⲉ and Ⲋ as well as the cursive sign ⲛ consistently give an /o/ with a phonetic realization of [o] or [u]. The exceptions mainly pertain to loanwords in Middle Egyptian.

The equivalents in Egyptian and Demotic are rarely conclusive since the transcriptions are too irregular, and, even for Coptic, only a few examples can be used. In Greek, the o (omicron) versus the Meroitic *o* is found in *B(e)rtoye* “Abratoye” / Gr. Ἀβρατοεις and in the place-name *Qoreti* “Qurta” / Gr. Κορτη, an ω (omega) in Mer. *Arome* / Gr. Ῥώμη “Rome,” and we find ου in the Meroitic name *Phome* “Pacomius” / Gr. Παχουμυς as well as in the Meroitic place-name *Boq-* “Quban” / Gr. Ἀβουνκίς.

In the comparisons with Latin, it becomes clear that [o] and [u] are inextricably linked, as is shown by the fact that these two phonetic values are written by the same grapheme. They are likely to be different realizations of the same phoneme, as hypothesized by Hintze.

6. The Understanding of the Vocalic System

In light of the preceding, a number of vocalic systems have been proposed. On the basis of the hypotheses put forward, there are five vowel phonemes, which can be organized as follows:

/i/ /u/
 /e/ /ə/
 /a/

This leaves the very rare variants of *i* with *o* as found in *Wos* / *Wis* “Isis,” which correspond with an alternation [u:] / [wi]. There is an even more frequent alternation between the graphemes *o* / *e*. In most of the cases, this phenomenon is produced after or before a labialized velar such as *q* [k^w] or *h* [χ^w], and the acoustic interpretation of the vowel could be a neutralization or “haplography” of the labiovelar quality. For instance, *qowi* “this is,” pronounced [k^wuwi], is sometimes written *qewi*, which would be [k^wewi] phonetically. The acoustic distinction with the former would be almost absent.

Another hypothesis suggests that there was originally a schwa [ə], which became “colored” by a [u] in the presence of a labialized velar. It is possible that the two phenomena occurred simultaneously so that, depending on the word, the most frequent writing is either with *e* (*mhe* / *mho* “abundant”) or with *o* (*qowi* / *qewi*).

C. PHONETIC CORRESPONDENCES

The following table of correspondences is only a summary of a complete correspondence between Meroitic and proto-NES. The phonological transcription corresponds to that which has been presented earlier rather than just a transliteration of the written Meroitic since the conventions and graphic system of the script make a considerable difference. The examples are based on the lexical correspondences found elsewhere in this volume. Hence, a mention of (2 occ.) or “two occurrences” indicates that the Meroitic word has two occurrences with the same phoneme in this set. The alternative transcriptions, such as *a* = /a/ = /ə/, are indicated with a tilde. Finally, for the word meaning “water,” the old form /asta/ has been used.

The correspondences (see Table 4.3) are listed in order of decreasing frequency with Nubian, Nara, and proto-NES. The digit in parentheses indicates the number of correspondences. Some Nubian connections have been drawn from Kenuzi-Dongolawi (KD) or from proto-Nubian of Kordofan and are indicated as such. It has not been deemed useful to include Taman and Nara, which are sufficiently represented by proto-NES. The substrate pre-Nile Nubian (SPNN) is also omitted since it comprises, mixed with some pre-Nubian, loanwords from Meroitic.

Although this is only a first comparison, it shows that the analogies that are found in the lexicon of the speakers of NES languages are not based on vague resemblances, but are part of regular correspondences that point at a possible shared origin. It also gives some characteristics of Meroitic within the North Eastern Sudanic languages.

Meroitic shows a strong connection with proto-NES and proto-Nubian where consonants are concerned. There is, for example, a good relation between *s and *r that is often subject to important modifications in Nara and Nyima. It all indicates a position that is chronologically close to the origin of this language family, as will become clear.

The phoneme *g in proto-NES and proto-Nubian is systematically represented in Meroitic by the consonants [ɣ] and [ɣʷ]. These fricatives are absent in today’s systems and in the earlier NES languages. Nevertheless, this particularity is not original. In some accounts of proto-Meroitic, written in Egyptian script, these phonemes do not appear until they have

Table 4.3: Phonetic correspondences

Meroitic	Proto-Nubian		Nara		Proto-NES	
/b/ initial 1 ex.: No. 16 (=p).	*b	(1)	b	(1)	*b	(1)
/b/ noninitial 4 ex.: No. 1; 7; 25 (=p); 26 (~ mb); 28.	*b	(2)	b	(2)	*b	(1)
	*g	(1)	g	(1)	*g	(1)
	*ŋg	(1)			*ŋg	(1)
/d/ initial 2 ex.: No. 4; 5.	*d	(1)	d	(1)	*d	(1)
	*t	(1)	n	(1)	*t	(1)
/d/ noninitial (= [d] intervocalic)	*dd	(1)	d	(3)	*ḏ	(3)
6 ex.: No. 9; 10; 11; 18; 22; 25.	*g < *d	(1)	Ø	(2)	*d ~ *r	(1)
	*k (ass.)	(1)			*r	(1)
	*rr	(1)				
	*ṭ (NK)	(1)				
/t/ initial 2 ex.: No. 20; 21.	*t	(2)	—	(1)	*t	(2)
			n			
/t/ noninitial 5 ex.: No. 3; 10; 15; 16; 19.	*d	(1)	ɟ	(1)	*d	(1)
	*t	(4)	t	(2)	*t	(1)
/y/ initial (written <i>h</i>) 2 ex.: No. 7; 8.	*g	(1)	b	(1)	*g	(2)
	g (KD)	(1)				
/yʷ/ noninitial (written <i>h</i>) 1 ex.: No. 13.	*g(u)	(1)	b	(1)	*g(u)	(1)
/k/ initial 3 ex.: No. 9; 10; 11.	*k	(2)	k	(3)	*k	(2)
	*ŋ	(1)			*ŋk	(1)
/k/ noninitial 3 ex.: No. 6; 18; 20.	*k	(1)	g	(1)	*k	(2)
/kʷ/ noninitial (written <i>q</i>) 1 ex.: No. 17.	Ø	(1)	Ø	(1)	*ŋ	(1)
/s/ initial (= [ç]) 2 ex.: No. 18; 19.	*s	(2)	s	(1)	*s	(2)
/s/ noninitial (= [ç]) 3 ex.: No. 3; 15 (~ t); 27.	*s	(2)	Ø	(1)	*s	(2)
					*t	(1)
/w/ initial 2 ex.: No. 22; 23.	*w	(2)	—		*w	(2)
/l/ initial 2 ex.: No. 12; 13.	*d	(2)	d	(1)	*d	(2)
			n	(1)		
/l/ noninitial 3 ex.: No. 7; 14; 23.	*l	(2)	l	(1)	*l	(2)
	*r	(1)	r	(1)	*r	(1)
/r/ noninitial 9 ex.: No. 1; 2; 6; 8; 16; 17; 21; 24; 26.	*r	(7)	l	(2)	*r	(7)
	r (KD)	(1)	r	(1)		
/m/ initial 3 ex.: No. 14; 15; 27.	Ø	(2)	m	(1)	*m	(2)

(continued)

Table 4.3: (cont.)

Meroitic	Proto-Nubian		Nara		Proto-NES	
/m/ noninitial	*m	(1)	m	(1)	*_M	(1)
2 ex.: No. 4 (?); 5.	*g (?)	(1)			*g (?)	(1)
/n/ initial	*n	(1)	l	(1)	*l	(1)
1 ex.: No. 28.						
/n/ initial	*n	(1)	—		n (KD)	(1)
1 ex.: No. 20.						
/a/ initial	*a	(4)	a	(2)	*a	(4)
4 ex.: No. 1 (~ə); 2; 3; 26.						
/a/ noninitial	*a	(2)	a	(6)	*a	(5)
27 ex.: No. 1 (2 occ.); 3 (~ u); 5; 7 (2	*e	(4)	ee	(1)	*e	(5)
occ.); 8; 9; 10; 12; 13 (2 occ.); 14; 15;	*ee	(3)	i	(1)	*i	(4)
16 (2 occ.); 18 (2 occ.); 19 (2 occ.); 21;	*i	(5)	o	(4)	*ɔ	(1)
23; 24; 27 (2 occ.); 28.	*ɔ	(1)	u	(1)	*o	(3)
	*o	(1)	Ø	(1)	*u	(1)
	*oo	(1)			*u	(2)
	*u	(5)				
	Ø	(1)				
/e/ initial	*i	(1)	a	(1)	*a	(1)
2 ex.: No. 6; 24 (~i).	*e	(1)			*e	(1)
/e/ noninitial	*e	(1)	a ~ o	(1)	*i (NK)	(1)
7 ex.: No. 11(~ə); 15; 20; 20; 20; 25; 25.	*i	(1)	e	(2)	*o	(1)
	*o	(1)			*u	(1)
	*u	(1)			*u (NK)	(1)
/ə/ initial	*a	(1)	a	(1)	*a	(2)
2 ex.: No. 1 (~a); 25.	*e (NK)	(1)	e	(1)		
/ə/ noninitial	*i	(3)	a ~ o	(1)	*i	(2)
4 ex.: No. 10; 11 (~e); 16; 22.	*o	(1)	e	(1)	*o	(1)
			i	(1)		
/i/ initial	*e	(1)	—		*e	(1)
1 ex.: No. 24 (~e).						
/i/ noninitial	*e	(2)	a	(1)	*e	(2)
7 ex.: No. 4; 6; 7; 9; 10; 16; 22.	*i	(3)	e	(2)	*i	(4)
			u	(1)		
			Ø	(1)		
/u/ noninitial	*i (?)	(1)	o	(3)	*o	(1)
4 ex.: No. 14; 17; 26; 28.	*o	(1)			*u	(2)
	*u	(2)				

become frequent in Egyptian. The list of Crocodilopolis, which dates to the sixteenth century BC, does not have any, while the passages in the Book of the Dead, probably dating to the end of the second millennium BC or at least to the Twenty-fifth Dynasty, transcribe the future tense of the verb *xrpxe* “to command” by a succession of the syllables *ḥu-ra-pu-ga*, where the last consonant is again an occlusive (and the first is an Egyptian loan). The appearance of these phonemes is perhaps due to the influence of the Egyptian language during the long colonization of the land of Kush by the New Kingdom of Egypt. Their absence in Old Nubian and in Nobiin is, on the other hand, additional evidence of a recent introduction (in any case, later than the Egyptian colonization).

In two of three cases, the initial *d of Nubian corresponds to an /l/ in Meroitic (lambdacism). This distinguishing phenomenon of Meroitic sets it apart from proto-Nubian and other NES languages. Nevertheless, the weakening of the initial *d to /n/ in Nara (see Rilly 2010: 378, Annex #37, 47) is perhaps analogous to lambdacism of Meroitic, which remains intriguing because of the very weak phonological rendering of the initial /l/ in so few words.

V Grammar: Facts and Hypotheses

The modesty of this chapter may be surprising, but the progress in Meroitic studies has been more successful in secondary domains such as the typology of texts and the origin of signs than in the knowledge of its grammatical system and vocabulary. It is not possible to present an overview of a Meroitic grammar. The few certainties limit themselves to some rules in the construction of the nominal clause, and all the rest, in particular the verbal system, is often contradictory hypotheses.

Most of the corpus, that is, the epitaphs, of which the best understood parts are essentially titles, names of deities, and place-names, allows some advancement in understanding the noun phrase. But the funerary texts are relatively poor in verbal constructions, and the examples are hardly improved by the official and royal descriptions. There is no “current state” of research on verbal morphology. But comparative studies of grammar conducted within the North Eastern Sudanic Group, to which Meroitic belongs, might in the future shed some light on this difficult matter.

A. GENERAL STRUCTURE

1. Segmentation of the Elements: What Is Separated by the Separator?

The first problems presented to linguists in the Meroitic texts are the segmentation of morphemes and the separation between syntactic units and the propositions. Since Meroitic counts only sixty graphic syllables, some will occur more frequently than others and may be considered morphemes. Similarly, the brevity of certain lexemes introduces ambiguities in the segmentation. For instance, does the personal name *Bekemete* in REM 0098, 0106, 0107 need to be split up as *Beke-mete* “Beke the Young,” as thought by Millet and Hofmann, or as *Bekeme-te* “(who is) at Bekeme (= Kawa?),”

as suggested by Abdalla (1999)? Here, one may favor the first solution since the personal name *Beke* is attested in REM 0089, while the place-name **Bekeme* is unknown elsewhere. But in other cases it is difficult to know and the method recommended by Trigger (1973:255) is frustrated by the small number of attestations or the poor state of the texts:

Morpheme boundaries should be considered secure only where convincing paradigms of variation can be drawn up and shown to apply in a systematic fashion throughout the entire corpus of material that is available.

It is similarly problematic to take apart the propositions. In the case of nonverbal phrases, the final place of the predicative *-o* or *-owi* allows one to define distinct groups, such as “it is the priest of Amun,” which can be found in the descriptions of individuals as found in the funerary texts, or “it is the brother of a priest of Amun” found in the description of relatives. It is certain now that the distinction made by early scholars between these two constructions is not attributed to their general structure, but to the presence of a genitive that is placed at the beginning of the second. They are both complete nonverbal clauses.

In the case of verbal propositions, it seems that the outer limit, at least in the majority of the cases, consists of the verb itself, but there are rare examples that have elements of the proposition placed after the verb (for instance, in REM 0405A). Above all, the verbal morphology is too little known. It is known, for example, that the suffixes *-to* and *-te* are frequently part of the verbal form in the royal stela, but there are homographic morphemes (*-te*, the locative in postposition), and there are nouns that end with the same graphic syllable (*peseto* “viceroy”). If the verbal lexemes are well known, such as in the funerary formulas, then the words and morphemes are simple to separate. But if there is an unknown word, it is difficult to know whether it is truly a verbal form and impossible to be certain about its segmentation.

Fortunately, the Meroites use a punctuation mark, the “separator.” It generally consists of two dots placed vertically above each other in the cursive script, and three in the hieroglyphic script. However, this sign is used with surprising irregularity among the scribes. In the carefully written texts, it generally provides the boundary of units that have a word and the morphemes that are immediately attached to this word such as determinants and postpositions. But the more careless scribes also place this mark between syntactic units, or just between clauses. Others, who are more particular, have isolated the morphemes, such as the genitive *-se*, the plural determinant *-leb*, the suffix *-kete*, or the facultative element *-wi* in *-o(wi)*.

Some scribes even seem to dissociate the segmented elements from their etymology, particularly in the case of Egyptian loanwords. For instance, the title “viceroy” is written sometimes *pe:seto* (REM 0329), where the Egyptian article *p3* of the word *p3-sntj* “the minister” is detached from the rest of the word. As Hofmann (1981a:39–40) remarked, there seem to be no specific rules for the use of the separator, and the intensity of its use depends on the scribe.

In two separate offering texts with identical passages, such as REM 0094 at Kalabsha and REM 1228 at Qasr Ibrim, one can see the same syntactic units with a significantly different use of the separator:

REM 0094	REM 1228
<i>mnote : se : lw :</i>	<i>mnoteselw</i>
<i>ariteneliselw :</i>	<i>ariteneliselw :</i>
<i>xlbi : lise : lw :</i>	<i>xlbiliselw :</i>

The three examples end with *selw* but have a different segmentation. In the first Kalabsha inscription, the punctuation completely detaches the element *se*, but in the third example it is linked to the determinant. In the second example, there is no internal separator used. This latter option is generalized in REM 1228, which is of a more recent date (beginning of the fifth century AD), but there are similar examples for the periods preceding this one. The name of the queen Amanishakheto, who ruled at the beginning of the first century AD, is once written with a separator after the name of the deity *Amni* “Amun” and everywhere else without. The separator can even occur in examples where there is no apparent explanation such as *an:t* “priest,” which appears in REM 0521, and would require a separator before the *n* if the Egyptian etymology is followed. It follows that the separator is a general aid for segmentation but cannot provide an irrefutable argument.

2. General Typology of the Meroitic Language

Griffith (1911a:22) has defined the Meroitic language as agglutinative, without gender marking, with postpositions and suffixes instead of inflection. They are all characteristics of the Nubian language as well. It is part of the grand typological classifications of the nineteenth century that were initiated by the German linguist Wilhelm von Humboldt.

Agglutinative languages, according to von Humboldt, juxtapose lexemes and morphemes according to a strict principle of separate morphological units. They contrast with other systems, such as “isolating languages” and “inflected languages,” but none of these categories can be strictly applied,

and, above all, they require an exact definition of “word.” Comrie (1981) has revisited the idea of a language typology of this kind. He speaks of an index of fusion and an index of synthesis on two axes. Generally speaking, Meroitic can be seen as a language with a low index of fusion.

There is no grammatical gender in Meroitic. The few attempts at identifying grammatical gender markers in the literature have been unconvincing and contradictory. If, for a particular reason, the Meroites needed to indicate whether a noun is feminine, they had the word followed by *kdi* “woman.” There is the form *mkdi* “goddess,” which is formed by way of haplography from *mke* /mak/ “god/goddess” (ancient form *mk* /maka/) followed by *kdi*. Similarly there is the form *mtekdi* “young daughter” (REM 0094) from *mte* “child/small” followed by the same *kdi*. This construction is not very frequent, since it is rarely necessary to have this specificity.

In the case of personal names, it seems that the suffix *-r* is characteristic for names of men, but in its absence it is not possible to know whether the indicated person is male or female. It also appears that some royal names that have been presented in the literature as men actually refer to queens. Particularly in epitaphs, it is difficult to know the gender of the deceased. Terms such as *kdise/kdite* “sister,” *wi(de)* “brother,” or *ste* “mother” in the description of the person are often the only clue for establishing the gender of the deceased.

In the case of pronominals, it is not uncommon that languages have gender markings where they are absent elsewhere. Yet this is not the case in Meroitic, where the pronoun *qo/qe* “this one” remains perfectly ambiguous in its reference to men or women.

It is not clear what the dominant word order in Meroitic is since the construction of questions, negations, anaphors, and, with only one example, relative constructions is not yet understood. The common order of phrases seems to be SOV (subject object verb). There is, however, at least one inscription in which the order is V_1OV_2S (REM 0405a) without knowing the relation of these two verbs, and there are examples in REM 1182 and 1183 where Millet (1982:72,76) suggests an SVO structure.

There are postpositions and no prepositions in Meroitic. The adjective follows the noun. The main problem is the place of the genitive, where the analytic genitive with *-se* follows the noun, but it seems certain that there is another type of genitive marker before a noun, without a specific morpheme, that allows us to understand the structure of the phrases concerning parentage. It is a question, therefore, which genitive construction should be seen as primary. In either case, the characteristics of Meroitic in terms of word order are common in languages close to Meroitic genetically or geographically.

Greenberg's (1966a) idea of "universals" predicts certain aspects of the Meroitic language that are so far not understood, on the basis of the characteristics presented earlier: Adverbial modifiers should be found in front of the verb (Universal 7); the position of the interrogative is not predictable (Universal 12); the subordinate verb has to precede the main verb (Universal 13); and the auxiliary forms also precede the main forms (Universal 14). Universal 23 reads, "With much better than chance frequency, if the common noun usually precedes the proper noun, the dependent genitive precedes its governing noun" (Greenberg 1963a:90). This then confirms the interpretation of a dependent genitive that precedes the governing noun in Meroitic as the common form. Universal 41 predicts the existence of a case system in languages with an SOV word order. Such a system is reduced to some traces in Meroitic.

There is a domain within Meroitic where the usual rules for the order of syntactic elements are often changed: the personal names. This is particularly the case for the names of rulers. Should we understand the element *ntk* / *ntke* / *ntki* that appears in royal benedictions as a noun, where it indicates a divine gift to the ruler, and that is followed by the name of the deity Amun in the name for the king Natakamani (*Ntk-mni*)? If it was a verb with the same root, it should be in the final position. If it was an adjective, it must follow the name of Amun. Finally, as a noun, as usual, it very likely indicates a quality of the god. One expects *Mni*, the name of Amun, either to follow the previous noun with a postpositional genitive marker *-se* or to precede this noun in the alternative genitive construction. Many hypotheses are possible, such as an imitation of the Egyptian structure of personal names, but it seems this category is not representative of the syntactic word order.

3. Problems with Identifying the Grammatical Categories

Theories on the kind and nature of grammatical categories are not necessarily helpful for a language as little understood as Meroitic and for Meroiticists mainly focused on translation. The following description is based on traditional nomenclature, with only average precision, which may nevertheless represent the constituent elements of the majority of languages, particularly African ones (cf. Creissels 1991): proper names (personal names, names of deities, place-names, names of peoples), nouns, determinants, adjectives, postpositions, predicates, pronouns, verbs, adverbs, and conjunctions. The methods used to assign a Meroitic word to these categories are listed in the following. Unfortunately, they are often inadequate.

The proper names are mainly identified by way of semantic criteria. Personal names are in the nomination and the filiation of the epitaphs. Outside these texts, there are no elements that can help to identify these names. For instance, in some cases (15 percent in the cases studied by Hainsworth 1980) they end in a determinant *-l(i)*, in which case they could appear as nouns. Names of deities, in addition to the Egyptian loanwords, can be recognized by the use of the analytic genitive (with a postposition *-se*) at the end of titles that are clearly known such as priestly terms (*ant* “priest,” *beliloke* “high priest [?]”), etc.). Place-names are only recognizable if they are followed by postpositions that refer to space, such as *-te* or *-k(e)*, and still one may confuse them with homonymic morphemes such as the verbal imperative suffix *-te*. The names of deities and the place-names can be followed by the determinant *-l(i)* in certain cases such as when the name of the divinity is actually a qualitative (cf. “the Eternal” in biblical terms), or when place-names appear when they indicate a territory. The names for peoples, as far as can be interpreted, are mainly found in execration inscriptions.

For nouns, it is the presence of a determinant *-l(i)*, which follows the noun, that provides the main mode of identification. But as explained before, confusion with proper nouns remains possible.

Adjectives are placed after the noun. They end the nominal phrase of which they are part. They can be followed by the determinant or the postpositions. There is hardly any way to distinguish an adjective from an affixed name, and it seems that various adjectives can become nouns. Perhaps the distinction in Meroitic is unnecessary.

The postpositions are attached to proper names and to nouns, which are, in this case, always followed by a determinant *-l(i)*.

Three categories, the determinants, the predicates, and the pronouns, are limited in number. Determinants can be identified by having an initial *-l*, followed by various vowels. There are *-l* and its late variant *-le*, the suffixed form *-li*, and the plural *-leb*. The predicates are *-owi*, often abbreviated to *-o* (plural *-kwi*), and *-qo-wi*, often abbreviated to *-qo* (variant *-qe*).

Finally, the verb is generally found in final position, where the clause can be isolated, and with a series of prefixes and suffixes found mostly in the benediction formulas. But it seems that certain verbal forms are nominalized with a determinant *-l* and use an auxiliary predicate *-o(wi)*, in which case they can be confused with nouns. Since a part of the existing affixes is still unknown, it is quite possible that certain verbal forms escape our attention.

4. The Nominal or Noun Phrase

The construction of a noun phrase is the only domain of the Meroitic grammar that is well understood because of its extensive use in the “descriptions” of epitaphs. One of its most remarkable characteristics is the presence of an embedded structure where the lexemes that are aligned in the first half of the phrase correspond with, in a mirror image, the morphemes in the second half that determine the role of these lexemes. Observe the following examples:

beloloqe / *Wos* / *-se* / *-leb* 2
 [lexeme [lexeme morpheme (genitive)] morpheme (plural
 determinant)]

high priest (?) / *Isis* / *of* / *several*
 “of the high priests (?) of Isis” (REM 1057/9)

ant / *Mnp* / *Bedewi* / *-te* / *-li* / *-se*
 [lexeme [lexeme [lexeme morpheme (locative)] morpheme (singular
 determinant)] morpheme (genitive)]
 priest / *Amanap* / *Meroe* / *in* / *the one* / *of*
 “priest of Amanap, the one who is at Meroe” (REM 0521/5–8)

The order of the elements in this expanding phrase is regular. The primary noun takes the first spot and is eventually followed by the adjective of an apposition, which can be another noun or a personal name. Then follows its complement, an analytic genitive (with the postposition *-se*) or a locative (with the postposition *-te*). The phrase concludes with the determinant of the primary noun, *-l(i)*, possibly followed by the predicate in the form of *-o(wi)*.

Each of these elements is discussed in more detail in the following, starting with the determinant that most often is the connecting element.

a. The Determinant

What is called “determinant” is a suffix element *-l* or *-li*, plural *-leb*. This term is preferred to “article” since it circumvents the debate whether it is a “definite” or “indefinite” article, a distinction that does not seem to exist for this language. It is certain that other determinants exist for Meroitic and various elements recur in the texts that could be of this nature. But this is still uncertain terrain and only a brief discussion will follow.

b. The Forms of the Determinant

The determinant *-l(i)* was the first morpheme identified in Meroitic, even before the decipherment of Griffith. Brugsch (1887:30–31, 91) noted its

recurrence in the hieroglyphic texts and suggested a participial construction. Griffith (1911a:23) thought of a “connective,” and Meinhof (1921–1922:5) was the first to suggest an “article.” The literature since then has concentrated on the semantic aspects and roles that this suffix may play. Finally, it is seen as a syntactic rather than a semantic marker, and two syntactic roles are given.

The simplest form of the determinant is *-l*, phonologically /la/. In the late period this is sometimes written as *-le*, where it seems that the /a/ has weakened to [ə] and perhaps finally became silent as an unstressed final syllable: *-le* is, therefore, read as /lə/ or /l/.

There exists a long form *-li* where it seems that the *-l* is joined by a suffix *-i* of an uncertain value. In this case, it probably corresponds with a pronunciation of a variation with a diphthong /lai/.

The plural is uniformly *-leb*. Hintze (1979:194) suggests a morpheme *b* /ba/ that follows the long form *-li*. This would mean that the diphthong suggested previously would change to a monophthong: /lai/ + /ba/ > /leba/, written *leb*. Or better, *-leb* comes from the simple determinant *-l* and then creates /la/ + /ba/ > /ləba/ with a weakening of the internal vowel into a schwa. This seems a simpler solution, but it suggests that this weakening process predates the one previously suggested from the first century AD and is much older.

There are some other forms known of this determinant when it follows particular nouns or noun phrases: *-lxe*, *-lke*, and in particular *-lw*. The first may be a simple determinant *-l* followed by a postposition *-xe* that has been attested elsewhere. The second may be a variant of the first where it includes the postposition *-ke* that indicates origin. Similarly, *-lw* may have a postposition *-w*, as hypothesized by Priebe (1971:285). These identifications are all possible since the determinant is mandatory between a noun and a postposition. It is not without difficulties since in similar texts, one can find *-li* and *-lxe* (benediction G) or *-l*, *-li*, and *-lw* (formula of *mlo-l-o(wi)*, proscynemes).

Finally, it is noted that the determinant may be followed by a vocative suffix *-i*. For example, the invocations of the epitaphs read *mk-lh-li* “o great god,” “o great goddess.” Although the phonetic realization is the same, it is not the same composition as the long form *-li*.

The determinant is generally written without a separator after the noun. Phonetic changes may change its appearance. Most commonly Griffith’s law will predict such changes. According to this phonetic law, a noun that ends in *-se*, such as one that has the analytic genitive postposition *-se*, contracts with the determinant *-l* and produces a *t*. Assimilations are also possible. The form *qor* (/qurra/ > /qur + la/) is from the form *qore*

“ruler,” followed by a determinant *-l*. The graphic representation *qore*, which in late Meroitic replaces the old form *qor* after the names of rulers, is not a noun without a determinant but has a form with an assimilated determinant *qore* + *-le*.

c. The Historical Derivation of the Determinant

The determinant is probably derived from proto-NES *-r(V), which has cognates in Old Nubian, Midob, and Taman. The Old Nubian form /l/ or /il/ with an optional connecting vowel principally marks the subject and appears as a connecting morpheme between a noun and certain prepositions, exactly as the Meroitic determinant does.

The majority of the postpositions in the NES languages are eroded, ancient grammaticalized nouns. The Old Nubian postposition “before” $\overline{\text{opw}}$ is not more than a grammaticalized form of $\text{opy} \sim \text{op}$ “head” used in an ancient genitive construction pilatoci-op-w “before Pilate,” which can be analyzed as Pilate/in/head, literally “at the head of Pilate.” In the postposition constructions of Old Nubian, the use of a determinant corresponds closely to that in Meroitic since proper names do not take a determinant, contrary to nouns.

Wos-n-l-w “in the presence of Isis” (REM 0124), lit. “at the presence of Isis”
mk-l-n-l “in the presence of the god,” lit. “at the presence of the god”

In the latter case, the noun *mk* requires a determinant, as opposed to the proper name *Wos*. The postposition is constructed by way of a noun *-n* “presence” with a determinant *-l* and followed by the case marker, or better, an object marker, *-w*, which can be removed.

The Meroitic determinant seems to have lost its semantic value in exchange for a purely syntactic role with a mandatory presence following a noun in certain constructions. In various examples, the genetic relation of the Meroitic determinant, the nominative suffix of Nubian, and the article *-r* in Tama (Rilly 2010: 384–385) becomes clear.

In Old Nubian, there is a morpheme *-xo* that is similar in appearance and has the function of adding focus. Its similarity with the nominal clauses in Meroitic suggests a linguistic relationship:

Old Nubian:

$\overline{\text{cta}}\text{poc-}\overline{\text{x}} \text{ } \overline{\text{do}}\text{y}\overline{\text{t}}\text{t-ri-go}\overline{\text{y-n}}$

cross / subject blind / plural / genitive

$\text{mo}\overline{\text{y}}\overline{\text{do}}\overline{\text{y-xo}}$

guide / copula / focalizer

“It is the cross, which is the guide of the blind” (Ps. Chrysostom, *In Venerabilem Crucem Sermo*, 14:17–18)

Meroitic

xrpxe -li

kdise -l -o

governor / determinant sister / determinant / copula

“she was the sister of the governor” (REM 0325)

The Meroitic *-lo* is not a single morpheme, contrary to the Old Nubian *-ḷo*. It is also not the copula, as has been thought in the past, but an occasional combination of the determinant *-l*, pronounced [la], mandatory for the nominal phrase, and the copula *-o*, pronounced [u]. Contracted into a diphthong, they eventually become [lo] as is found in the texts. The Old Nubian morpheme cannot be dissected and, moreover, has a minor syntactic status, suggesting that it is a loan from Meroitic. It cannot be found in any other Nubian language, not even Nobiin, the direct descendant of Old Nubian, and, as such, is probably not a constitutive element of the language.

d. The Roles of the Determinant

The noun has to be accompanied by the element *-l(i)* in most of the structures. This element is, therefore, not the same as a definite or indefinite article but may be translated by either of them depending on the context:

Amnirense / *qor* (<**qore-l*) / *kdke-l* (REM 0628)

“Amanirenas, / **the** ruler, / **the** Candace” (definite article)

ssor-li / *kdise-l-owi* (REM 0301)

“of **a** scribe / sister the (she) was”

= “she was the sister of **a** scribe” (indefinite article)

qelile / *nbr-li-se* / 1 (REM 1182)

“bracelet / of gold / : 1” (no article)

If the noun is followed by a personal name, it does not need the *-l(i)*. Observe the following contrast:

qore Tneyidmni “the ruler Taneyidamani” (REM 0628)

Amnirense qor (<**qore-l*) “Amanirenas, the ruler” (REM 1044)

The first has a personal name that specifies the one that has the title, while in the latter example it is the title that specifies the name, and, therefore, the determinant is required.

The difference between the simple form *-l* and the long form *-li* is not clear, and it is not even certain whether the Meroites made a distinction themselves. The same form is found in identical contexts without any discernible semantic or phonetic motivation:

<i>pesto-l ste-l-o-wi</i> (REM 0327)	<i>ssor-l yetmde-l-o-wi</i> (REM 0516)
<i>pesto-li ste-l-o-wi</i> (REM 0325)	<i>ssor-li yetmde-l-o-wi</i> (REM 0270)
“she was the mother of the viceroy”	“s/he was related to a scribe”

However, the long form is always used when there is the postposition *-se* in the analytic genitive of nouns.

The determinant does not seem to mark case, contrary to Old Nubian, where *-l* indicates the subject. However, the semantic value of the noun seems to affect the presence of a determinant when the noun is an object of a phrase. The nominal phrases in the formulas A, B, and C have a noun and an adjective. In the first two formulas the objects of the phrase never take a determinant, while in formula C the presence of *-l(i)* at the end of the noun phrase is systematic. Similarly, in the prayers of the royal texts, the gifts requested from the gods have no determinant. It is possible that certain semantic categories explain why the objects of A and B (“water” and “bread”) and those of the prayers (“life” and “force,” etc.) do not receive a determinant. A similar analysis for nouns in subject position is not possible because of the limited number of examples.

The determinant is obligatory when the noun is followed by a postposition. Accordingly, all nouns with the analytic genitive, characterized by the use of the postposition *-se*, have a determinant *-li*. Here, however, there is no difference for particular semantic categories. Examples with other postpositions are very rare, but it seems that *-l*, the simple form of the determinant, is to be used. With the postposition *-te* of the locative, one finds *mk-l-te* “at the god’s,” which, together, can become a noun with the meaning “temple” (see Hintze 1960:145, 159); or *qor-te* (assimilated from **qore-l-te*) “at the king’s,” hence perhaps “palace” (see Hofmann 1981a:322).

This rule also applies to proper names accompanied by a locative. The construction is mostly known for divine hypostasis. The determinant is inserted between the two postpositions and can, in a literal translation, be glossed as “the one”:

ant / *Mnp* / *Bedewi* / *-te* / ***-li*** / *-se*
 priest / Amanap / Meroe / in / **the one** / of
 “the priest of Amanap, the one (who is) at Meroe” (REM 0521)

It could also be that the name of the divinity is understood. It is the determinant that makes sure the locative is nominalized, as with the proscyneme (REM 0117):

ant / *Pelqe* / *-te* / **-li** / *-se* / *-l* / *-o*

priest / Philae / in / **the one** / of / the / (*he*) is

"he is a priest of the one (that is) at Philae (= Isis of Philae)"

In this example, *-li* takes a role of "demarcation" rather than "determination" (see Leclant 1970–1971:80, Hintze 1979:33 "Grenzsignal"). It allows a definition of what is understood in the general nominal phrase, equivalent to a noun, in the way that a second postposition would be used.

Although it is not a postposition, the suffix of the vocative *-i* acts in the same way. Every noun that it follows has the determinant in the form *-l*. That leads to the composition *-li*, a form that seems the long form of the determinant, both for the writing and for the pronunciation /lai/.

Finally, the determinant is nearly systematic in the construction of the synthetic genitive: *X-l(i) Y* "the Y of X." The examples are many in the descriptions of relatives:

ant / **-li** / *wi* / *-l* / *-owi* (REM 0318)

priest / **a** / brother / the/ (he) was

"he was the brother of a priest"

This construction is only used for a noun. If the governing name is a personal name, it is not followed by a determinant, and only the position of the governing noun reveals the genitive.

e. Other Possible Determinants

A number of other determinants have been suggested, particularly by Millet and Hofmann: *-ke*, *-ni*, *-wi*, and *-sel*. The first two are found with numerals; the next is found instead of *-l(i)* in the formulas of benedictions C and G. As for the final one, it appears in ancient texts added to the nouns *kdi* "woman" and *abr* "man" (REM 1003, 0092, 1044). The last consonant *-l* is actually the common determinant, and the element *se* has been recently translated as "each" with the help of Egyptian parallel texts.

There are two obscure terms, *pyk* and *yeyk* (REM 0094), that have been translated by Zyhlarz as "this" and "each," respectively. But there is little to justify this translation. Also, it has recently been proven that *qo*, which is always attested as a demonstrative pronoun "this one," can also be used as an adjective: *kdi qo* "this woman."

Finally, the numerals are also determinants. They are never followed by *-l(i)*. Nevertheless, they are attested only as numeral signs, and it is doubtful that they can be written out in a text. It is noted that it is also extremely rare to find Egyptian texts in which numbers are spelled out in texts.

5. The Adjective

There are only a dozen words that can be considered adjectives so far, and among them there are only four that have a meaning that is anywhere certain: *lh* "great," *mete* "small," "young," *mhe* "abundant," *mlo* "good," "beautiful." The others have a vague meaning, but their properties as adjectives are not certain: *sxi*, synonymous with *mete*; *sedew*, synonymous with *mhe*; *qorode* "royal (?)." Finally, some are only hypothetical: *doke*, *dole*, *dot* seem to have a positive meaning in the benedictions; *tme* has the same in the personal names.

It is understood that there are few certainties about the adjectives. It is even possible that they are not an independent category of words in Meroitic. Indeed, other languages in Africa and elsewhere have shown that adjectives are not a necessary category in a language. Instead, it is possible that the words mentioned are nouns that are used in apposition. It is, for example, sure that *lh* and *mlo* are also nouns, as one finds in GA 20, an honorific *lh Wrose-te* "(the) great at Warush (?)," and in REM 1012, a title *mlo qorise* "man of value of the king." There seems to be an abstract noun, *mlowi* or *mleyi* (found substituted for *mlowi* in REM 1096 and 1326), formed by *mlo*, which could indicate "good health" in the prayers to the gods and in the oracular amuletic decrees. There is, however, a chance that *mlo* is not itself a name of a quality, as in "the great," because it has been found in this other role of a true adjective.

It has been suggested that the adjectives are formed with a prefix *m*-since three out of four have this initial. This is probably just a coincidence, particularly since the other examples do not have this characteristic.

The attribute adjective is placed directly after the noun: *apote lh* "grand messenger," "primary messenger," and *ato mhe* "abundant water." There is no additional marking. If the noun is plural, the specific determinant *-leb* is added to the end of the phrase, eventually after the adjective if that is the final element, for instance: *apote lh-leb* "great messengers."

The situation is less clear for the predicative use of the adjective. In the formulas *mlo-l-o(wi)* of the epitaphs, the term *mlo* is followed by the determinant *-l* and predicated at the end of the nonverbal proposition by the particle *-o(wi)*, exactly in the same way as a name. Because of the determinant, it seems that, if *mlo* was actually an adjective, it has been nominalized here.

Perhaps the adjective can be predicated by transferring it to the beginning of a sentence. It seems Meroitic personal names that begin with *mlo* (or its variant *mli*, mostly found with women) could be instances of such a structure. Unfortunately, the study of these names is not conclusive either, because it cannot be ruled out that this element is simply used here as a noun.

6. The Apposition

It is possible to distinguish three types of appositions in Meroitic: those that include a personal name, those that take on a noun to specify it, and those that juxtapose two nouns. This latter construction is more tentative. The three configurations can only be studied in nonverbal clauses either in the epitaphs or in royal protocols, which limit the domain of observation.

The most common appositions and the clearest ones are those that put a personal name beside a title. In virtually all cases, the title precedes the personal name and is, therefore, not followed by the determinant *-l(i)*, because the proper names sufficiently determine the phrase. There is either a simple noun

ssor / **Atkewitr** / *yetmde* / *-l* / *-owi* (REM 1020)
scribe / **Atakewitara** / nephew / the / (he) was
“he was the nephew of the scribe **Atakewitara**”

or a more complex nominal structure

ant / *Amni* / *-se* / **Aboroye** / *terike* / *-leb* / *-kwi* (REM 1063)
priest / Amun / **of** / **Aburuye** / child begotten / the (plural) / (they) were
“the priest of Amun **Aburuye** has begotten them”

The inverted order can also be produced, in which the title is affixed to the name. The noun follows and takes the determinant *-l(i)*. This structure is only regular in the royal protocols, perhaps because the royal name was considered sufficiently prestigious to take on this function:

Mnxble qor (<**qore-l*) “Amanakhabale, **the ruler**” (REM 1026)

One finds nevertheless a construction that seems particular to two northern texts of Medik (REM 0088, 0089) and for which Hintze suggests a Late Egyptian influence:

Mqolteqye / **pelmos** / **Bedewi** / *-te* / *-l* / *yetmde* / *-l* / *-o* (REM 0089)
Maquleteqaye / **general** / **Meroe** / **at** / **a** / nephew / the / (he) was
“he was the nephew of Maquleteqaye, **a general at Meroe**”

There is only one example of a particular apposition with the repetition of the noun:

mesen / -li // **mesen** / **Mnp** / **Pedeme** / -te / -li / -se / -li // *terike* / -l / -owi
 [noun + det.] [noun [deity. [place. + loc.] det. + gen.] det.] [noun + det.] [copula]
 [gov. noun] [←————— **apposition** —————→] [gov. noun] [pred.]

mesen / a // **mesen** / **Amanap** / **Primis** / **in** / **the one** / **of** / **a** // begotten child / the / (he) was
 “a *mesen* (title), a *mesen* of Amanap, (the one that is) at Primis, has begotten him.”

It is as if the scribe wanted to specify, belatedly, a title that seemed incomplete to him, but that was already completed by the determinant -li.

A much more common type juxtaposes two different titles within the same structure, but one may question whether this is an apposition. One finds, for example, in REM 0129:

qorene / *kroro* / -l / -owi
 royal scribe (?) / prince (?) / a / (he) was

The term (*a*)*kroro* is sometimes attested on its own (*kroro-l-owi* “it was a prince (?)” in REM 1091/6), so that it can be considered here as a noun.

One will observe, nevertheless, that these structures are only attested in the individual descriptions of the epitaphs. And yet, in these passages, the different titles are systematically the object of separated predications. One never writes, “he was an X and a Y” but always “he was an X, he was a Y.” One must, therefore, assume that in these supposed appositions, the second title is not different from the first but takes on a supplementary specification without which its presence will be useless. Also, the inventory of words attested in the second position is particularly limited: one finds (*a*) *kroro*, *ssimete*, and *kttre*, and among these three, only the first two are used in isolation. There is not the diversity of unique words that accompanies the titles elsewhere (including *qorene*, *sobxe*, *siremroke*, *smt*, *smrso*, *wleke*, *womnise*, *mlewy*, *sekesekine*). It is, therefore, more likely that these words are not part of titles but have roles as adjectives. The phrase *qorene kroro* is better translated “first royal scribe.”

7. The Genitive

This section addresses both the existence and the definition of the two genitive constructions in Meroitic. The first is analytic, where the governing noun is in postposition and marked by the postposition -se (N + G + -se). The other is constructed by a simple anteposition of the governing noun without the addition of any specific morpheme (G + N). The situation has

similarities with the English synthetic or “Saxon genitive” *the King’s daughter* and the analytic or “Norman genitive” *the name of the king*, but both these constructions have a marker.

As in English, it is equally probable that the analytic genitive is the more recent construction, even though it is probably still old. At the time that the Meroitic language was written the constructions coexisted but had specialized uses. The synthetic one was mainly used for family relations while the analytic one was for other kinds such as the functions of such and such a dignitary. Although recognized by the Meroiticists Abdalla and Hintze, the two constructions were never part of any systematic analysis (for an overview see Rilly 2007: 522–524).

a. The Synthetic Genitive

It is relatively simple to show that there is a synthetic genitive in Meroitic. The following example illustrates this:

pesto-l-o (REM 0543) "it is the viceroy"

pesto-l wi-l-owi (REM 0250) “it is the brother of a viceroy”

The combination *pesto-l wi-l* is syntactically equivalent to *pesto* in the first example. It can only be a nominal phrase. We know that the deceased, who is cited in REM 0250, is not himself a viceroy. It is, therefore, not possible that *wi-l* forms an apposition. There are two nouns in one noun phrase. The governed noun cannot be *pesto* since the deceased does not have this function. It is thus *wi-*, and *pesto* is the governing noun. The fact that, in nearly all cases, the governing noun has a determinant agrees well with the basic function of this element: to specify a noun in such a way that it can subsequently specify another.

This construction is not limited to the synthetic genitive, as the following propositional phrases with the analytic genitive illustrate:

REM 0122:

perite / *Wos* / -*se* / -*l* / *qorene* / *Wos* / -*se* / -*l* / *yetmde* / -*l* / -*o*
agent / *Isis* / of / *a* / royal scribe (?) / *Isis* / of / *a* / nephew / the / (he) was
he was the nephew of an agent of *Isis* and of a royal scribe (?) of *Isis*

Gebel Adda 04:

perite / Wos / -se / -leb / qorene / Wos / -se / -le b / yetmde /
 -qebese / -l / -owi :
 agent / Isis / of / the (pl.) / royal scribe (?) / Isis / of / the (pl.) / nephew /
 of them / the / (he) was

literal translation: agents of Isis and royal scribes (?) of Isis, he was their nephew

These phrases are identical apart from the plural markers for the determinants and the possessive. The latter provides a topicalization of the initial group. There is only one solution: The synthetic genitive is a construction that is independent (and found in the same context of the period) of the analytic genitive with the order N + G + -se.

The problem that follows is to find a definition of the exact structure of the nominal clause that has been formed. It is known that, at least for Meroitic, the genitive itself must have a determinant. If it is just a personal name, then that is sufficient by itself, while other nouns would need the determinant -l(i). The exceptions are negligible. The situation is less clear for the governed noun, which appears almost always before -o(wi), where the presence of an article makes sense, but where it is undoubtedly induced by the predication. There are some examples of the synthetic genitive that appear in other constructions. This is undoubtedly the case for *qoresem-*, which is most likely an assimilation of **qore-le sem-* "king's wife." One finds this term sometimes directly before -owi, which hardly helps. But there are two occurrences in different constructions (REM 0217 and 0247):

qore *sem -leb* : *semte -l* -owi
[noun₃ + det. (assimilated) + noun₂ + det.] noun₁ + det. + copula
"he was *semte* (a kinship term) of the king's wives"

qore *sem -le* : *Dewekdil* : *mtese -l* -o
[noun₃ + det. (assimilated) + noun₂ + det.] + anthrop. noun₁ + det. ? + copula
"he was *mtese* (a kinship term) of the royal spouse Dewekadila"

The two structures are complex since the group *qoresem-*, which is constructed by a synthetic genitive *qore* (< **qore-le*), is itself used as a composite governing noun in another synthetic genitive construction. In the first example, *qoresem-* takes the plural determinant -*leb*, but, because it is itself used as a governing noun, its determinant is obligatory. The second phrase is more instructive. In fact, the presence of the determinant in front of a personal name in apposition is quite extraordinary. The rule dictates that a noun followed by a personal name does not take a determinant. This construction can be explained, seemingly tautologically, by the necessary presence of a determinant after the governed noun (noun₂) to ensure the cohesion of the genitive construction.

The synthetic genitive construction in the case of two nouns is tentatively:

(governing noun + determinant) + (governed noun + determinant)

The governing group may be replaced by a personal name:

(personal name) + (governed noun + determinant)

If a personal name is affixed to the governing noun, it will lose its determinant.

(governing noun + personal name) + (governed noun + determinant)

The second governed group is never replaced by a simple personal name, but if one was affixed to this group, the determinant would stay in place, as the earlier example of REM 0247 suggests:

((governing noun + determinant) + (governed noun + determinant)) + personal name

In fact, here, the personal name is affixed to the entire construction formed by the governing noun and the governed noun, and not directly to the latter group only. This detail may explain the continued presence of the second determinant.

b. The Analytic Genitive

The existence of this construction, as opposed to the synthetic one, does not need to be proven further since Griffith already accomplished that. The morpheme that is used is systematically the postposition *-se*. If the genitive is a personal name, it is placed directly beside it. Until the 1980s, only names of deities were found in this position:

ant Mni-se “priest of Amun” (REM 0287)

soni Mnp-se “*soni* (title) of Amanap” (REM 0323)

yeroteke Ms-se “*yeroteke* (title) of Mash” (REM 0269)

perite Wos-se “officer of Isis” (REM 0099)

Millet (1982) published a few epitaphs from Qasr Ibrim that add a particular genitive of a personal name:

kid Kisri-se “Caesar’s gift (?)” (REM 1182)

It seems that the names of well-known people take the same construction as the names of deities, as was to be expected.

If the governed term is a noun, it is necessarily followed by a determinant. There are few obvious examples of the analytic genitive with a plural, but it seems that the suffix *-se* will be followed by the plural determinant *-leb*. Nevertheless, the title *qorbse* (variant *qorpse*), with the clear meaning of “(servant) of rulers,” serves as an example. It is then necessary to

agree that *qorbse* is a contraction of **qore-leb-se*. Similarly, in REM 0358/2, an ostrakon of Karanog, a damaged text reads ...] *itebse* which almost certainly is a plural genitive ...] **ise-leb-se* with the application of Griffith's law. Finally, there is an inscription on cloth from Gebel Adda (GA 47) that seems to have the sequence *txbo sebetalebse*. The second element, despite the obscurity of this text, appears to be a good example of a plural genitive construction.

Contrary to the synthetic genitive, the determinant in final position in an analytic genitive does not always seem necessary to complete a noun phrase. In the oracular amuletic decrees there is a text with the following phrases in the position of the subject: *Ms arb-li-se* "Mash of the *arb* (unknown meaning)" (REM 1325) and *Wos mlwi-li-se* "Isis of *mlwi* (unknown meaning)" (REM 1096). Even if the governed noun in these examples is a personal name it does not explain the absence of the determinant because after a nominal locative, the exact same construction with a postposition *-te* instead of *-se*, there is a determinant: *ant Mnp Bedewi-te-lī-se* "priest of Amanap (who is) at Meroe" (REM 0521).

It is also frequently observed that the analytic genitive is used with an elliptical construction of the governed noun. This construction is particularly found in certain titles such as *qorbse* / *qorpse* that were discussed previously, and its singular form *qorise*. Literally, *qorise* (< **qore-li-se*) means "(the one) of the ruler," "(servant) of the ruler," and its plural *qorbse* (< **qore-leb-se*) "(the one) of the rulers," "(servant) of the rulers," where the plural perhaps indicates the king and the Candace. The governed noun is often a name of a deity: *Mnp-se* "(servant) of Amanap" (REM 0201), *Mni-se* "(servant) of Amun" (REM 0201), *Wos-se* "(servant) of Isis" (REM 0119).

8. The Use of the Two Genitives

With these two genitive constructions, Meroitic is part of a large group of languages in the world, particularly in Africa, that distinguish "alienable" and "inalienable" possession. This seemingly clear distinction hides a complex reality. First of all, the genitive not only marks a possession, but indicates a multiplicity of possible relations between two nouns. Furthermore, the border between the inalienable (for example, terms for kinship, parts of the body, qualitative aspects) and the alienable (for example, cattle, cookware) differs among languages and cultures. For the most part, African languages seem to use a simple juxtaposition for inalienable possessions and a specific morpheme for the alienable ones (cf. Claudi & Heine 1989:3). The genitives can, therefore, simply be considered "direct" and "indirect." The changing word order of the governing and governed nouns is less widespread.

As a language that has a marked and an unmarked genitive, the language of Kush is in accordance with many other African languages. The synthetic genitive expresses inalienable relations, such as family relations. It is also used in prepositional phrases such as *X n-lw* “in the presence of *X*” or *X se-lw* “under the protection (?) of *X*” that show a restriction to qualitative and abstract attributes. In contrast, the analytic genitive is used for alienable matters such as a position in the service of a cult or an administration. Its use is much less restricted since it may also indicate a destination, as in *apote Arome-li-se* “envoy to Rome” and not “envoy of Rome” (“Rome” is used here for Roman Egypt). On the other hand, this genitive is the only one found so far with possessive pronouns, such as *qe-se* “of him/her/it” or “his/her/its.”

This distinction between the two genitives can be of great help with the semantic identification of certain terms. For instance, *yetmde* is only found in synthetic genitive constructions and occurs frequently in the descriptions of relatives as part of the epitaphs. For this genitive, the type of term is much restricted. The genitive suggests that it should be an inalienable term so that a family relationship, as suggested by Hintze (1999:234–236), is more likely than a social or work relationship, as suggested by Hofmann (1981a:125–134). The meaning of the word has been established as “nephew,” “niece.”

It has been suggested that in many languages the indirect genitive, alienable possessions, uses a marker with a spatial origin (Claudi & Heine 1989:5–7). This may also be the case in Meroitic, where the postposition *-se* could be the result of a grammaticalization of a noun that expressed a place and that was part of a synthetic genitive. If so, the analytic genitive is an innovation in Meroitic, whereas the synthetic structure studied earlier constitutes the original genitive.

9. The Genitive Alternative with *-o*

In a few rare texts, it seems that a different marker is used in the analytic genitive, written as *-o*. The form is only attested for two names of deities. There are *at Ms-o* “priest of Mash” in REM 0234, 0249, 0259; *tetere Ms-o* “*teter* (title) of Mash” in REM 0270; *ant Mn-o* “priest of Amun (?)” in REM 1202. In the phrase *atepedemo*, perhaps *ate Pedem-o* “priest (?) of / at Primis,” which is present in REM 0227, 0268, 0287, 0290, 1083, the suffix is the same, but it may have a locative meaning. All these forms are from the late period and restricted to Lower Nubia. The suffix *-o*, pronounced [u] or [o], is undoubtedly also a postposition like *-se* and it brings to mind the postposition *-w*, pronounced [wa], which seems to have, among others, a locative meaning.

10. The Suffix *-(y)ose*

In a certain number of titles and above all with the qualifiers that are put beside these titles, there appears a suffix *-yose* or *-ose* for which a genitive meaning has been suggested (Trigger & Heyler 1970: 35, 37, Schenkel 1973c:55–56) and contested (Hofmann 1974b:48–50).

It is, however, curious to see this as a genitive variant since in none of the twenty examples is there a determinant *-li*, mandatory, as shown before, between a noun and its genitive postposition. One may suggest that these terms correspond to the genitive of proper nouns, but this is clearly incorrect since some are constructed with an adjective, such as *mlo* “good” or *mxe* “abundant.”

A form such as *mseqorose* contains the noun *mse*, with the possible meaning of “child” or “page,” and a qualitative *qorose*, in which the word *qore* is found. It is plausible that the second element has taken an adjective meaning “royal.” The suffix *-(y)ose* would allow an adjective to be formed out of a noun. Since it may also follow place-names, such as in *pdmose* < *Pedeme* “Primis,” it could indicate an origin. As was explained before, the distinction between adjective and noun in Meroitic is not always clear. In any case, an alternative form of the genitive is not likely.

11. The Locative

The term “locative” has been used since Griffith, but it may be confusing. The locative discussed here almost never appears as a complement of a verbal phrase; instead it is a particular kind of genitive that is taken by a noun with a particular spatial connotation. As with its close cousin, the analytic genitive, it integrates itself into the nominal phrase. It takes a postposition with a close resemblance, *-te*. The structural characteristics are the same. The only scheme that is known for the locative is the following:

governing term (noun or name of a god) + governed place-name +
postposition *-te*

It is found with a governing noun, such as *peseto Akine-te* “viceroys in Lower Nubia” (REM 1088), and with a name of a deity, such as *Mnp Pedeme-te* “Amanap (who is) at Primis” or “Amanap of Primis” (REM 1076). As with the synthetic genitive, the determinant does not seem to be mandatory for the coherence of the phrase. If the phrase is itself included in a genitive construction, as is not uncommon, the determinant should be there. This is also the case if the governing term of the locative construction is a name of a deity. For instance:

ant / *Mnp* / *Pedeme* / *-te* / **-li** / *-se* (REM 1088)

priest / Amanap / Primis / in / **the one** / of

“priest of Amanap (the one who is) at Primis”

The locative is mostly used in the funerary descriptions to indicate the place where the official's activity takes place or where the sanctuary of a deity is located. For example, one finds *xrpxne Atiye-te* “governor at Sedeinga” (REM 1091) and *Wos Pilqe-te* “Isis (who is) at Philae” or “Isis of Philae” (REM 1010). In some cases, as was pointed out by Hofmann (1978b:274, 1981a:107), it is not a place of residence but a place of origin. This is particularly the case with the term *mlomrse* “citizen (?)” since people identified as *mlomrse Atiye-te* “citizen (?) of Sedeinga” are buried at Faras (REM 0504), Serra West (REM 1057), or Arminna (REM 1066B).

When the place is not a city but an entire area, the noun that expresses the location is placed in a genitive rather than a locative construction. Compare the following:

locative: *apote Xlite-te* “envoy at Khalite” (REM 0129)

genitive: *apote Arome-li-se* “envoy to the Roman Empire (Roman Egypt)” (REM 1049)

locative: *aribet A[tiye]-te* “aribet (an official) at Sedeinga” (REM 1090)

genitive: *ar[i]bet Twete-li-se* “aribet (of the nome) of Tawete” (REM 1333)

As for the genitive postposition *-se*, a grammaticalized noun is a probable origin for the postposition locative *-te*. Vycichl (1958:80) has suggested a noun meaning “stomach” or “belly,” which is *tou* in Old Nubian (Browne 1996:181). It is *táwà* in Nara and *tol* in Miisiirri (Taman Group), which gives a likely North Eastern Sudanic origin for the Meroitic locative. The postposition *-te* has then an etymological meaning, “in the stomach of” or “inside,” and it would have originally served as a governing noun placed after the governed noun in a synthetic genitive.

12. The Plural of Nouns

The plural of nouns is uniformly marked by the determinant *-leb* in all the occurrences that have been accessible for analysis.

ant “priest” → *ant-leb* “priests”

apote “messenger” → *apote-leb* “messengers”

This apparent universality is not due to the limited part of the text corpus that is currently understood. The absence of an inner plural marker for the nouns is attested in the most conservative groups of the North Eastern

Sudanic language group (Taman, Nyima, and Kordofan Nubian). Rare nouns such as “human being,” “man,” “child” have only plural forms, mostly suppletive. The main opposition of number is collective/singulative, where only singulative is specifically marked. The marking of plurality in Meroitic with the determinant might be an innovation under the influence of inflective languages such as Egyptian and Cushitic.

The plural determinant *-leb* consists of a singular *-l* /la/ with an adjunction of the plural marker *-b-*, which is also found as part of other suffixes. For instance, the verbal dative singular *-x(e)-* has a plural *-bx(e)-*, and the possessive *qese* “his/her” has a plural *qebese* “their.” It is plausible that a vocalic weakening took place in the development of *-l + -b* so that /la/ + /ba/ became *-leb*, pronounced as /lɔba/. Similarly, the plural form has been subject to phonetic processes such as assimilation, *qorbse* for **qore-leb-se* “(servants) of the rulers,” and Griffith’s law, *kditeb* for **kdise-leb* “the sisters” and *mlomrteb* for **mlomrse-leb* “the citizens (?)”

Finally, a noun accompanied by a numeral remains in the singular form, as is common in Egyptian and many other languages. See, for instance, in REM 1003: *abr 32 : kdi 135* “32 men and 135 women.”

a. The Historical Derivation of the Suffix Plural *-b-*

One of the main objections to classifying Meroitic as Eastern Sudanic or even Nilo-Saharan was the absence of a velar, /k/ or /g/, plural marker that is present, at least partially, in the rest of the group. Instead, the plural suffix appears as *-b-*, also with a determinant forming *-leb*, used for all presently known nouns. In addition, it is part of the object pronoun suffix (verbal dative), creating *-bx* and *-bxē* from *-x* and *-xē*.

Although the proto-NES form is **g*, it is observed that in Nara and Meroitic in particular, it changes a labialized form into /b/ when it follows or is followed by the rounded vowels **u* or **o*. The Meroitic form *-leb* would have a proto-form **-ra-gu*, where the intervocalic /g/ is transformed to /b/. The rounded vowel is necessary for this mutation. The demonstratives have plural markers such as *-roγ* in Old Nubian, *-gu* in Kenuzi-Dongolawi, and *-gù* in Nara. The plural suffix of Meroitic follows the Nubian and Nara cases seamlessly. Tama has a plural demonstrative *-ḡ*, and this tone on the consonant is testimony of the disappearance of a vowel. The reconstructed form **-gù* would be nasalized in final position, and while the vowel becomes silent, the tone of the vowel remains on the resulting velar nasal.

Following these principles, the plural object suffix, which in an archaic form is attested as *-bx*, pronounced as [(a) baya], is derived from a previous form, **(a)guga*. The first becomes /b/ through labialization, while the

other is realized as /y/, as is found elsewhere in Meroitic (see also Rilly 2010:377–378).

As a result, the Meroitic plural marker fits remarkably well within the processes of North Eastern Sudanic despite the chronological distance between the languages in this group.

13. The Vocative

The vocative was until now only known as part of the funerary invocations and only concerned names of deities and some divine epithets. The recent discovery of oracular amuletic decrees in Meroitic, including an initial address to the beneficiary, allows the extension of this list to personal names and titles. It confirms some of the rules, particularly pertaining to morphophonology. The vocative suffix seems to be uniformly presented as *-i*. It is directly attached to proper nouns, occasionally forming a diphthong with the final vowel of the noun.

Mnp /manapa/ “Amanap” → *Mnp-i* /manapai/ “o Amanap!” (REM 0091C)

If the noun ends in *-i*, it seems that the vocative suffix creates a long vowel, written as *-eyi*.

Asori /usuri/ “Osiris” → *Asoreyi* /usuṛī/ “o Osiris!”

**Ptiyesi* /patiesi/ “Peteise” → *Ptiyeseyi* /patiesī/ “o Peteise!” (REM 1096)

The suffix *-i* is not added directly to the noun. The presence of a determinant *-l* is required. The following examples from the funerary texts and the oracular amuletic decrees are constructed as follows:

mk-lh-l-i “o great god!” “o great goddess!” (REM 0129)

peseto-l-i “o viceroy!” (REM 1324)

stemdeti (< *stmdese-l-i*) “o *stmdese* (title)!” (REM 1319A)

It should be noted that it is impossible to know whether one is dealing with a vocative or a noun followed by the long form of the determinant *-li* without having, as is the case here, parallel formulas that include proper names for which the vocative is more easily identifiable.

The presence of a determinant is equally necessary when a personal name is followed by an extension and then placed into a vocative. This is notably the case in the solemn invocations where the nature and the type of this extension are, so far, impossible to understand. But it is also found when a name of a deity is followed by a locative to indicate the hypostasis of the god:

Wos wetneyineqe-l-i “o Isis the *wetneyineqe!*” (*passim*)

Asori wetri (<**wetrr-e-l-i*) “o Osiris the **wetrr-e!*” (*passim*)

Apedemk Dqri-te-l-i “o Apedemak (who is) at Daqari!” (REM 1293)

The suffix of the vocative operates in the same way as the postpositions: The phrase requires a determinant except for personal names if they are not followed by an extension.

As far as its origin is concerned, the vocative is less likely to have been an interjection, such as the Egyptian vocative *i*. In Nilo-Saharan, and more precisely in Eastern Sudanic, there is a morpheme of the second person singular *-i/*, and perhaps this is related to the Meroitic vocative.

14. Case Markers and Postpositions

In all the NES languages, there is a case system that has, as a minimum, a nominative, usually unmarked; an “objective” that takes the function of accusative and dative, realized by a suffix that contains a velar consonant; and a genitive, marked by a suffix consisting of a nasal. Other types of complements, such as locatives, are constructed with the help of postpositions. This minimal system seems to have been part of proto-NES as well.

Proto-NES is analyzed to have had **-gV* (perhaps **-ga*) as an object nominal and pronominal marker. Its use has been described as differential object marking (see Dimmendaal 2009), which appears characteristic of this language group.

The descriptions of Old Nubian, Nobiin, Midob, Tama, and Nyimang have all noted that the accusative suffix seems optional and is mainly used to disambiguate (Browne 2002:36, Werner 1987:97, 1993:29, Tucker & Bryan 1966:210–212, Stevenson 1956/7:176–177). The economized case system is not unusual in the world’s languages (Bossong 1991), and the strategy of using the markers appears hierarchical. It favors “animate” objects (human > animate > inanimate) and definite objects (personal pronouns > proper nouns > definite nominal phrases > particular indefinite nominal phrases > general nominal phrases).

This system explains some of the particularities of Meroitic. There has never been a suggestion of a full case system for Meroitic. Instead, the terms of the genitive or the locative have always been treated as constructions, as in a classical grammar. However, the presence of an object pronoun suffix (verbal dative) and the absence of a direct object or accusative marker complicate our understanding.

The case system in Meroitic is used sparingly and concurrently with other grammatical structures. The nominative is not marked. There are two

genitive constructions, of which the synthetic genitive descends from the proto-NES genitive (governing noun + suffix *-n(a) + governed noun) and corresponds with an inalienable relation. In Meroitic the specific marker *-n(a) has been lost. It was also lost for Nara, but it did not disappear systematically within the NES group. The analytic genitive, which seems a Meroitic innovation, marks an alienable relation with a postposition *-se*. Neither genitive uses a case ending.

The accusative does not seem to be marked either, but the analysis has been limited to funerary inscriptions. In formula C', which occurs in royal and princely epitaphs, the nominal object group is, in four out of twelve cases, marked by a suffix *-w*:

x[r] mlo-l-w hol-kete
 food good + det. + obj. to present + imperative
 "present (him / her) with a good meal"

This is not a clear parallel with the hierarchical system alluded to previously. The scribe added the accusative *-w* to solemnify the formula, but this accusative ending does not seem to be mandatory.

Rather than *-w* (= [wa]), we would expect an ending **-x* (= [ɣa]) for the object marker, in proto-NES **gV ~ *ga*. However, as is often the case, the phonetic evolution of the morphological markers is characterized by much erosion. Still, there exists a late variant *-xe* (= [ɣ] or [ɣə]) clearly from **-x* (= [ɣa]), which is encountered in formula G (REM 1024) and most of all formula J, where it occurs eight times:

atepoke dot-l-xe pisi-tx-kese
 offering ? great ? + det. + obj. fact. ? + to present ? + imperative
 ??? "present (him) with a great offering!"

Following the example of the other NES languages, the marker *-w* indicates not only the direct object (accusative) but also the beneficiary (dative) in phrases where it cannot be included in the verbal form. For instance, in the presentative construction found in the epitaphs, there is no true verb but a copula, and the dative cannot be marked elsewhere but on the noun phrase:

mk-l-w mlo-l- o-wi
 deity + det. good + det. + copula + part. emph.
 "he was a man of valor for the god" (REM 1116)

The same dative marker is also found on the word "ruler" but, for example, not on the word "superior" found at the beginning of this passage from REM 1116. "Ruler" and "divinity" may be higher in the hierarchy and require the

case marker. However, in the same formula, found in REM 0521, the dative marker is absent for both “ruler” and “god.” The presence or the absence of an object marker in Meroitic, at least historically, seems to be dependent on the scribe. The selective marking concerns both the direct object and the beneficiary, contrary to the situation in, for instance, Tama or other NES languages.

15. The Pronominal Object Suffix *-x(e)/-bx(e)* (“Verbal Dative”)

This suffix is placed directly after the radical of the verb, singular *-x* (later *-xe*) and plural *-bx* (later *-bhe*). It is only known for the third person.

The most common occurrences indicate a beneficiary, hence the indication “verbal dative” that is sometimes attributed to this suffix. There are some examples where it is used as an accusative, but the only translatable phrases that have this accusative construction appear in late texts:

br-leb kede-bx

“(I) have killed the men” (REM 0094/20)

A verbal suffix with a similar meaning is found in the NES languages. There is a verbal suffix in Nubian that indicates the plurality of the object (direct object or the beneficiary). It has the form *-j-* directly attached to the radical of the verb. It is similar for Old Nubian (Browne 2002:49), Nobiin (Werner 1987:173–175), and Midob (Werner 1993: 49–50). In Dongolawi the same suffix sometimes indicates a plurality of the action (cf. Armbruster 1960:192–193). In Kordofan Nubian, there is a regular change to *-f-*, and it marks, in the case of verbs, plurality of object and of action (Jakobi 2001:36, 54, 69–70). A reconstructed form of **-j* is then possible for proto-Nubian. This consonant is absent in proto-NES, but it may have come from **g*, particularly in the presence of /i/ or /e/. In Nyimang there is a plural verbal marker *-ḏi* that also may have come from **-gi*, as the shift **g > ḏ* is regular in this language. In intransitive verbs it indicates the plurality of the subject, in transitive verbs that of the object. A similar suffix *-kV* is found in Tama so that a proto-NES suffix **-gV* can be reconstructed that clearly shows plurality of subject or object, following the verb stem.

In Meroitic, this verbal suffix became *-k* and seems to indicate only the plurality of the subject. It is found in the plural of the copula (*-kwi*) and in the imperative plural form *-kete*. There is not even a partial connection between the Meroitic plural object marker *-bx(e)* and Nubian **-j*. This leads to the conclusion that this marker is more likely pronominal than verbal in Meroitic.

The proto-NES form for the third-person singular may be reconstructed from the nominative as *an, or plural *an-gi. The plural suffix was *-gu for the demonstrative pronouns in Eastern proto-NES. The proto-form for the object marker was probably *an(-i)-gV for the singular and *an-gi-gV or *an-gu-gV for the plural. In Meroitic, the object suffix *-gV has become /ya/, and the plural suffix *-gu has become /ba/ following regular historical changes. The pronoun then became integrated in the verbal phrase, an invention within the Meroitic language. This integrated form was perhaps simplified. The graphic representation does not give enough information, since, for instance, *elxte* “give him” could correspond with |ela-ya-t(ə)|, |el-aya-t(ə)|, or even |ela-aya-t(ə)|, that is, with a simplification of a consonantal group *-ng-. But, since the nasals in this position are not written, we cannot even exclude the alternatives |ela-ŋya-t(ə)|, |el-aŋya-t(ə)|, or |ela-aŋya-t(ə)|. In the latter two cases, the correspondence with proto-NES becomes optimal:

Pronoun in proto-NES		Pronoun suffix in Meroitic
sg. *an-ga “to him/her”	>	sg. aŋ-ya , written -x-
pl. *an-gu-ga “to them”	>	pl. am-ba-ya , written -bx-

Unfortunately, this reading cannot be proven. It is also possible that the pronoun has become reduced to these suffix elements. In any case, the relation between the suffix pronoun of Meroitic and the equivalent in proto-NES is evident since it matches the sound correspondences found in the lexicon.

16. Postpositions

The two most frequent postpositions are the morphemes *-se* of the analytic genitive and *-te* of the locative. They were discussed separately in order to distinguish the analytic and synthetic genitive, but both morphemes are part of the same category of postpositions. There are three slightly different situations in which postpositions can be found:

Proper name + postposition

For example,

Wos-n-lw “in the presence of Isis” (REM 0124)

Medewi-ke “(who comes) from Meroe” (REM 1141)

Noun + determinant + postposition

For example,

mk-l-w “for (?) the god” (REM 1116)

qor (<*qore-l) *n-l* “in the presence of the ruler” (REM 1003)

Name of a deity + extension (here a locative) + determinant + postposition

For example,

Wos Pileqe-te-l-ḥe “for (?) Isis who is at Philae” (REM 0101)

Wos Tebwe-te-li-n-lw “in the presence of Isis (who is) at Abaton” (REM 0122)

There appear to be two kinds of postpositions: the simple ones, such as *-w*, *-xe*, or *-k(e)*, and the compound ones, which include *n-lw* and *se-lw*. The simple postpositions are often called “suffixes,” and they might even be described as simple case markers (see earlier discussion). The compound postpositions are constructed with the help of a noun (*n* or *se*) and have to be described as constructions that have a synthetic genitive with a determinant followed by the simple postposition *-w*, for instance, *n-lw* < *n-l-w* literally “by the presence of,” *se-lw* < *se-l-w* literally “by the authority (?) of.” Their status as postpositions, and not as simple nominal phrases, is deduced from the tendency they have to simplify themselves, particularly their final *-w*. One finds *n-l* in REM 0095, *n-le* in REM 0094, and *se-l* instead of *se-lw* in REM 1003, 1044, 1039, 1221, and 1293. The noun that they create is also distinct by having an extension, either a possessive or an adjective:

n-betw < **n-bese-l-w* “in **their** presence” (REM 0123)

Amnp nete se-mlo-lw “by the good authority (?) of Amanap *nete*” (REM 1044)

The presently known postpositions are limited in number and have, for the most part, a spatial connotation. In the following list, the most probable examples are presented:

- (1) *-xe* signifies “to(ward)” or “for” according to Priese (1971), who mainly based his assessment on the object pronoun suffix (verbal dative) *-x*. It is found in the benedictions G and J, where its use is hardly clear, as well as three times in REM 0101. In each case the context is too obscure to confirm the meaning suggested by Priese:

Wos Tebwe-te-l-xe “for (?) Isis (who is) at Abaton”

- (2) *-ke* or *-k* indicates a spatial origin and may translate as “from” or “of.” Its use is clearest where a geographic meaning is conveyed: “from X to Y.” It follows the place-name from which a person departs, while the postposition *-yte* is affixed to the place-name where the person arrives. Between the two phrases so defined there is a term *dik*, which, instead of a postposition, seems to be an adverb with a meaning that is something like “all the way.” One finds in REM 0094:

Simlo-k dik Selele-yte “from Shimalu all the way to Selele (Shellal?)”

The postposition *-k(e)* appears after the place-name, sometimes in parallel with the locatives ending in *-te*. In REM 1393 there are three consecutive propositions; their complements are unfortunately not yet understood. The following is a rare example of postpositional groups in clear verbal contexts since most of the other occurrences that have been attested are part of nominal phrases:

Dqri-ke : de-tohe-wi e-toh-te : “from Daqari (Dangeil?), give your present (?)”

Selel[e]-ke : de[-to]he-wi e-toh-te : “from Selele (unknown place), give your present (?)”

Tolkte : de-tohe-wi e-toh-te “at Naga, give your present (?)”

(where *Tolkte* is the result of haplography from the locative construction *Tolkte-te*)

In REM 0103, one can ask oneself, together with Millet (1977:318), whether the phrase *Bedewi-k* found in a prayer does not indicate a direction “toward Meroe” instead of an origin “from Meroe.” There are, in fact, equivalents in Demotic as part of the proscynemes from Philae and Dakka (Ph. 416, Dak. 31 and 32) where the Kushite subjects request of the goddess a safe return “to Meroe.” A variant or perhaps a compound postposition *-kw* is found in some texts (REM 0101, 0103, 1333). In the same formula there are also *Akile-k* (“from Lower Nubia”) in REM 1088 and *Akile-kw* in REM 1333. Perhaps *-xw* is a variant with a form that predates an assimilation (REM 0247, 1088, 1333).

- (3) *n-lw* is a rare Meroitic term for which there is an Egyptian equivalent. It appears in the proscynemes, where it corresponds with Egyptian “in the presence of.” REM 0122 gives the following example:

Wos Pileqe-te-li Wos Tebwe-te-li-n-lw berwi

“it [the proscyneme] is written (?) **in the presence of** Isis (who is) at Philae and of Isis (who is) at Abaton.”

It appears that a postposition referring to more than one entity takes the possessive *bese* “their,” either for the sake of clarity or following a kind of topicalization, as in this example from REM 0123:

Wos Pileqe-te-l Wos Tebwe-te-l-n-bese-lw yeberwi

“Isis (who is) at Philae and Isis (who is) at Abaton, it [the proscyneme] is written (?) **in their presence.**”

As was noted earlier, the final element *-w* is unstable, so there are variants such as *n-l* in REM 0095 and 1003, and *n-le* in REM 0094/16.

- (4) *-se-lw* appears primarily after the names of gods as part of the royal titles in REM 0094, 0101, 1141, 1228, and 1293. The separator sign following the two parts in this construction, as exemplified in REM 0094 and 0101, *se : lw :*, shows the structure of these postpositions. The meaning is not yet certain, but the comparison with other phrases, particularly in REM 0094 and 1228, suggests something close to “by the authority of,” “by the power of,” or “under the protection of” (see Rilly 2000b:107–110). Millet proposed “on behalf of.” The following two examples are of interest here:

qore Mnpte-se-lw qoreyi “ruler who is ruler by the authority (?) of Amun of Napata” (REM 0094)

Amnissxeto Mt Mni-se-l “Amanishakheto, under the protection of Mut and of Amun” (REM 1293)

As the last example from the early period (REM 1293, end of the first century BC) shows, the element *-w* may disappear, in which case the postposition is reduced to *-sel*. One may then ask oneself whether the noun *-se* (carrying the idea of “power” or the idea of “domain,” etc.) is not actually the same lexeme as the one that gave rise to the postposition *-se* that after an initial simplification could have become the analytic genitive postposition.

- (5) *-w* is a simple postposition with which the preceding postpositions were built. Instead of “to(ward)” or “close to,” as suggested by Priese, a recent study (Rilly 2000b:19) suggests, on the basis of a comparison with a Middle Egyptian preposition *m*, that in certain cases its meaning is close to that of a dative:

mlo-l-owi mk-l-w mlo-l-o qor-w mlo-l-o

“she was a woman of valor; she was a woman of valor **to** the deity; she was a woman of valor **to** the ruler”

(REM 0327/15–17 ; *qor-w* assimilated form from **qore-l-w*).

It is noted that for various parallel texts of the epitaphs around the same era (REM 0521, the beginning of the first century AD), the forms *-lw* and *-li* alternate. One may conclude that there is no difference between the two and that *-lw* is a variant of the determinant *-l(i)* (see Hofmann 1981a:182, 186). It seems more probable that the *-w* may be a case suffix used selectively (see the previous section).

- (6) *-yte* (REM 0094/11, 13, 27), *-ytise* (REM 1088, 1333), *-yotise* (REM 0247, 1088, 1333) are perhaps variants of the same postposition that may be translated as “up until.” But it is not impossible that the last two forms contain a genitive and are the result of an assimilation from a structure

like Y-y(o)*te-li-se* “of the (region that goes) up to Y.” They are attested as complements to the title of *ant* “priest” and *tbqo*, a similar title, whereas the simple postposition *-yte* seems to be reserved for verbal constructions.

Other words such as *-nte*, *-tk*, and *tmi* may be postpositions. But the texts where they occur are not clear enough for such a conclusion. Finally, the postposition *-o*, a rare variant of the genitive *-se* or the locative *-te*, was already discussed elsewhere.

B. THE PRESENTATIVE CONSTRUCTION

There is nothing known about Meroitic verbal clauses other than that they probably conform to a word order of SOV. It is, therefore, extremely difficult to make progress in this domain until more certainty is gained about verb morphology. What is known are the propositional phrases that are called here “presentative” constructions. This term only refers to propositional phrases without a verb that contain a pronoun-copula (“this is,” “s/he is”) and a predicate. Even if it were the same as all the other nonverbal propositional phrases of the type “X is Y,” there are no good examples to confirm this. There are examples of topicalization, such as “X, it is Y,” where X can be a pronoun or a noun phrase, but this is only found in a highly reduced syntactic context.

1. The Presentative Construction without Topicalization

There are two known types of presentative clauses. The first is common in nominations and presents the deceased at the beginning of a funerary text. This type is also found in the short legends that accompany the images of deities or people and that provide their names. The formula has the form X *-qo(wi)*, with a variant X *-qe(wi)*, where X is systematically a personal name or a name of a deity. For example:

Akilibile qowi “this is Akilibale,” “here is A.” (REM 0225; epitaph)

Atri qo “this is Hathor,” “here is H.” (REM 0015; iconographic legend)

The second type uses a predicative element *-o(wi)* and offers a greater variety of structures in which it is found. The plural is *-kwi* while in the previous type the terms *-qo(wi)* or *-qe(wi)* are never plural since each person has a particular presentative clause attached of which there can be up to three in a row.

This second type is first of all used in the individual descriptions of the epitaphs and in the royal protocols in a structure of the type x-l-o(wi) “s/he

is a/the" (plural *x-leb-kwi*), where the predicated term *x* may be a simple noun or a nominal phrase with varying complexity:

pqr-tr-l-o "he is the crown (?) prince" (REM 0017; iconographic legend)

ant Wos-se-l-owi "he was a priest of Isis" (REM 0215; epitaph)

It also appears in the descriptions of relatives in a synthetic genitive construction of the type *x y-l-o(wi)* "it was the *y* of *x*" (in plural *x y-leb-kwi*), where "*x*," the governed noun, is a kinship term, and "*y*" is the characterization of the person (personal name, title, or both):

xrpxe-li kdise-l-owi "she was the sister of the governor" (REM 0325)

peseto-leb yetmde-leb-kwi "they were the niece and nephew of the viceroys" (REM 0223)

apote Arome-li-se Stpiye kdite-l-owi "she was the sister of the envoy to Rome Shatapiye" (REM 1049)

Finally, it can be used for predicating personal names in 10 percent of the epitaphs. These names actually contain a final determinant (compare with French names such as "Leblanc" or "Lenoir") so that only the second type of presentative clause was possible.

2. The Copula *-o/-kwi*

There is an exact correspondence between the Meroitic copula *-o* and similar forms in Old Nubian, Nobiin (Werner 1987:167–170), and Midob (Werner 1993:57). Only Old Nubian also features a specific plural form. Meroitic often has this copula followed by *-wi*, of which the function has been described as "emphatic" rather than as carrying any specific meaning. One cannot state that this segment *-wi* in *-kwi* is the same as in *-o(-wi)*, where it may be omitted.

<i>peseto</i>	<i>Sdewli</i>	<i>yetmde</i>	<i>-leb</i>	<i>-kwi</i>
viceroy	Shadewali	nephew	det.pl.	copula pl.

"They are the nephews of the viceroy Shadewali" (REM 1063)

The attribute that is preceded by a plural copula is, in all known occurrences, a noun followed by a determinant. Accordingly, the propositions that accompany this noun end in the sequence *-lebkw*. The segment *-leb*, like *-l* in the singular *-l-o*, is only the determinant of the attribute and could be detached from the group. However, the scribes have never introduced a separator within this group. The only predicative element that varies from singular to plural is *-o / -kwi* or phonetically [u] / [kawi]. If the

plural is [akawi], then, if it is followed by the determinant *-leb*, or [ləba], the sequence of [a] + [a] may be simplified as either an [a] or its long variant [a:]. The fact that no scribe has introduced a separator between *-leb* and *-kwi* within the more than sixty known attestations of the sequence *-lebkwi*, while they would separate a determinant from its preceding noun, seems to indicate that the syllabic boundary does not correspond with a morphological one. In other words, the /a/ induced after the *b* was felt to belong to the copula. If the hypothesis of a plural [akawi] is correct, then it again offers a strong resemblance with the Old Nubian form /ague/.

3. Presentative Clauses with Topicalization

Two structures of this kind are known for Meroitic. The first is a variant of the habitual nomination *X qo(wi)* “this is X,” “here is X.” A first pronoun *qo* is followed by the usual predicate that is found most often in combination with a second *qo*, except as noted earlier, if a personal name contains a determinant *-l(i)*, in which case it is combined with the simple predicate *-o(wi)*. Observe the following difference:

qo X qo(wi)

“this one, it is X,” literally “this one, this one is X” (17 occurrences)

For instance,

qo Atqo qowi

“this one, it is Ataqu” (REM 1057)

qo X-l-o(wi)

“this one, it is X-l(i),” literally “this one, he is X-l(i)” (four occurrences)

For instance:

qo Teḃiṣi-lh-l-owi

“this one, it is Teḃishi-lakha-li (Teḃishi the Elder)” (REM 0130)

It is clear that the optional aspect of the formulation as well as the break in the phrase, represented by the comma, both suggest that this phrase is used for a topicalization. It is similar to the construction

qo qore nobo-l-o

“this one, it is the Noba king”

A variant of this process has the nominal phrase placed at the head, such as *kdi qo* “this woman” or *s qo* “this lord (?)”, in which *qo* is an adjective and does not convey a predication. The latter would require *-l-o* after the noun,

as was suggested in a previous chapter. In REM 1084 one finds the following example:

kdi qo Axdoye qowi

“this woman, it is Akhaduye”

The second structure, which is found in about twenty examples in the description of relatives, is part of a genitive construction from which one term, a plural, is placed at the head of the phrase and agrees with the possessive (*qe*)*bese* and its variants, meaning “their.” It was discussed previously and is presented here in short:

X (plural), y-(*qe*)*se-l-owi*

“X (plural), s/he (the deceased) is their y”

It is noted that the sequence of *-se-l-* is most often contracted to *-t-* because of Griffith’s law. The following example shows the complexity of the construction:

beloloke / Npte / -te/ -li/ Pedeme/ -te/ -li // ste / -bese / -l / -owi

great priest (?) / Napata / at / a / Primis / at / a // mother / of them / the / she is

literally: “a great priest (?) at Napata and one at Primis, she is the mother of them”

“she was the mother of a great priest (?) at Napata and another at Primis”

4. Pronouns and Complex Pronouns

The pronouns in Meroitic are not established with much certainty. It seems now certain that *qo / qe* and its composites are simple demonstratives. The evidence for the element *-o*, as in the predicative *-o(wi)*, and the element *k*, as in the plural predicative *-kwi*, is more challenging as a possible third-person singular or plural pronoun, respectively.

In contrast there is a possessive that corresponds to the third person, which is paradoxically based on the demonstrative *qo / qe*. Hintze (1979:60) was the first to translate these forms as simple possessives. They consist of numerous variants, mostly for the plural, of which many are probably just graphic ones.

singular possessive: *qese*, *aqese*, and perhaps *se* “his/her/its”

plural possessive: *bese*, *qebese*, *aqebese*, *aqobese* “their”

The construction is quite transparent with a pronoun *qe / qo* followed by a genitive postposition *-se*. It is noted that these analytic genitive constructions are limited to “alienable” relations, which is not so much the case here since all these possessives are attested with kinship terms such as “mother”

and “sister.” In the plural, the morpheme *-be-* is inserted between the pronoun and the postposition, which is obviously related to the plural suffix *-b-* that appears in the determinant *-leb* and the object pronoun suffix (verbal dative) *-bxē*. The singular possessive *qe-se* then originally meant “of this one,” the plural *qe-be-se* “of those ones.”

The possessive, like all the analytic genitives, follows the noun. It does not dispense with the determinant with which it may contract following Griffith’s law, for instance, *yetmde aqobetowi* (< *aqobese-l-owi*) “s/he was their nephew / niece” (REM 0225). If the noun is followed by a personal name, the determinant is not necessary: *yetmde qese Mhye qowi* “this is his nephew / niece Makhaye” (REM 0215).

5. Verbal Morphology

A few studies on the Meroitic verb exist, but they are not in agreement. The principal problem is the disparity between the verbal forms of different texts: The funerary benedictions present prefixes that are never found in the royal inscriptions, and, conversely, the latter uses suffixes unknown to the benedictions. This is not surprising because royal stelae developed different narrative styles from those of the latter parts of epitaphs containing prayers. But within the same type of text, one also finds considerable divergence between one document and the other. Various factors, as mentioned before, are the basis of this diversity: the evolution of the language over the centuries, the different orthographic standards (particularly with respect to assimilation), and a clear search for variation in expression by the Meroites themselves. There is, therefore, no other option than to present the proposed verbal structures for three main types of texts: the filiations, for which, as will be shown, the notion of a verb is far from certain; the funerary benedictions, where a coherent model has been presented by Hintze; and the royal inscriptions, where the only extensive research comes from Schenkel.

The general formula for the morphology of the verb is the following (see Hofmann 1981a:216):

$V = \pm \text{prefix} + V \pm \text{infinitive} \pm \text{suffix}$

Prefixes have only a small number of known occurrences: *ps-* and variants in the benedictions, *d-* in the oracular decrees, and perhaps various graphic prefixes *e*, *ye-*, and *yi-* with, according to Hintze (1977), no particular meaning. Finally, the work of Meinhof has suggested the prefix *t-/te-* in the filiations, but there the nature of the verb remains uncertain. Prefixes in North Eastern Sudanic languages are rare to the extreme. One suspects that most

of the instances found in Meroitic are simply personal pronouns (mainly in royal texts) or a first verb used in verbal sequences (in funerary texts).

The second element is the verbal radical itself. Some nine verbs are known with a certain meaning. Among them, only *-l-* (or *el-*) “to give” is attested in various types of texts. The syllabic structure of the verb radical varies from CV, *-l-* [la] or *-he-* [ɣwe], and CVC, *-tre-* (= /tar/), to CVCV, *-bqo-* /baqu/, and CVCV *-dotedi-* or *-twd-* (= /tawada/).

The suffix may consist of an object pronoun (so-called verbal dative), singular *-x(e)-*, plural *-bx(e)-*, which indicates that the verb has a second object, the beneficiary of the process, as illustrated in the following example:

<i>A[pe]dem[k-i]</i>	<i>Tneyidmni</i>	<i>pwite</i>	<i>el-x-te</i>
Apedemak + VOC	Taneyidamani	life	give- object -IMP 2p sg (?)

“O Apedemak, give life to Taneyidamani!” (REM 0405)

Some words that are verbs in certain contexts are also found with the determinant and the copula, which is reminiscent of a gerund or participial constructions. In addition, this determinant can be preceded by suffixes *-k(e)*, *-se*, and *-te* that resemble postpositions but may be ultimately homonymous particles. The following examples show the variation for the verbal lexeme *arohe*:

arohe-l-owi (REM 1088)

yirohe-te-l-o (REM 1088)

yirohe-se-l-owi (GA 29)

This is as much as can be stated with some certainty about the Meroitic verb. Apart from the object pronoun, no other morpheme has been identified or understood without doubt.

6. The Verbal Structures

Although the two expressions in the filiation of the epitaphs have traditionally been translated as verbs meaning “born of” and “begotten of,” the morphology of the words *te-dxe* and *t-erike*, respectively, has remained unclear and unsatisfactory for a conclusion that these are verbs. While the meaning of the phrases is not questioned in a general sense, the precise translation of each element has not been agreed upon.

This is different for the verbs found in the benedictions. Here there are hundreds of examples that allow a better analysis although they are

primarily found with an imperative or optative. The general structure is as follows:

noun + adjective ± determinant ± verbal complex

The subject of the verb is not self-evident. It is probable that they are the funerary gods Isis and Osiris, which have been introduced in the invocation. The general sense seems to be “give him (give them) such offering.”

The verbal complex has much variety, because of not only the number of verbs that is used, but also the extraordinary diversity of prefixes and suffixes that surround the radical. Hintze (1955:363–365) was one of the first to present an exhaustive account of the verbs in the benedictions and all their prefixes. Trigger (Trigger & Heyler 1970:51) has subsequently suggested that many, if not all, variants of the prefix *ps-* are allomorphs of the same morpheme. Schenkel (1973a) provides a full list of all the elements of which the semantics remain largely unknown. Their frequencies are listed in the following:

Prefixes and their frequencies:

<i>ø-</i>	14.3 percent
<i>bis-</i>	0.2 percent
<i>bsi-</i>	0.4 percent
<i>i-</i>	0.7 percent
<i>pe-</i>	0.2 percent
<i>pi-</i>	0.4 percent
<i>pisi-</i>	8.2 percent
<i>piwi-</i>	0.2 percent
<i>psi-</i>	25.1 percent
<i>pwi-</i>	0.5 percent
<i>ye-</i>	2.0 percent
<i>a-</i>	0.4 percent
<i>bs-</i>	0.2 percent
<i>e-</i>	1.4 percent
<i>p-</i>	10. percent
<i>pesi-</i>	0.2 percent
<i>pis-</i>	2.3 percent
<i>pitosi-</i>	0.2 percent
<i>ps-</i>	25.6 percent
<i>pso-</i>	0.4 percent
<i>y-</i>	0.4 percent
<i>yi-</i>	6.2 percent

After an analysis of these prefixes, the final number can be reduced to four: \emptyset -, *pse*- (with variations), *p*-, *y*- (with variations). The last one was analyzed by Hintze as being part of an initial vowel of the verb. The following scenario is then produced for the verb *he*- that is found in benediction A:

Prefix *ps*-:

ps(e)- + *-he*- = /pas/- + /ih/- > /pasih/- written *psih*-

Prefix \emptyset -:

\emptyset - + *-he*- = / \emptyset / - + /ih/- > /ih/- written *yih*-

A similar exercise was conducted for the suffixes. Their frequencies are as follows:

<i>-\emptyset</i>	10 percent
<i>-ke</i> ...	2.6 percent
<i>-k(e)te</i>	54.3 percent
<i>-se</i>	0.2 percent
<i>-to</i>	2.6 percent
<i>-k(e)</i>	0.7 percent
<i>-kese</i>	5.5 percent
<i>-k(e)tese</i>	4.5 percent
<i>-te</i>	19.1 percent
<i>-tese</i>	0.5 percent

After an analysis the following eight forms remained:

- \emptyset , *-ketese*, *-kete*, *-tese*, *-te*, *-kese*, *-se*, *-to*

The final element *-se* can be considered optional and seems to be added at will. Hintze compares this element with the Old Nubian *-so* that is optional and used to reinforce the imperative. The forms *-ketese* and *-kete*, as well as *-tese* and *-te*, can be seen as part of the same suffix. Assimilation of /t/ and /s/ further reduces the set:

-ketese = /kətsə/ > /kəssə/ written *-kese*

-tese = /tsə/ > /ssə/ written *-se*

The dative suffix *-xe*- or *-bx(e)*- may be part of another assimilation with some of the final consonants of the verbal lexeme and could explain the absence of *-ke*- in *-tese*, *-te*, and *-se*. A (supporting?) vowel /a/ seems to appear in this case. This evolution could be illustrated with the following two examples:

psihebxekete (REM 0255) = *ps(e)*- / *ihe* / *-bx(e)* / *-kete* = /pasihbaxkət/
 prefix / radical / dative suffix / suffix
 > /pasihbaxxat/ written *psihebxtete* (REM 0237)

psihেকে (REM 0217) = *ps(e)- / ihe / -kete* = /pasihkət/
 prefix / radical / suffix
 > /pasihhat/ written *psihte* (REM 0270)

This leaves only three morphologically distinct suffixes, according to Hintze: *-ø*, *-kete*, *-to*. The others are only variants of *-kete*, due to assimilation and addition of the emphatic particle *-se*. The occurrence of both assimilated and nonassimilated forms in the same era is then explained by the various orthographic standards that were employed.

Hintze's theory and its semantic implications have not been generally accepted. Hofmann (1981a:207-214) has presented lengthy criticism, which has been partly redressed by Rilly (2007:570). It suffices to state that, at present, the theory of Hintze remains the most promising point of departure for future research on the Meroitic verbal structure.

The royal texts are little understood and the theories for the verbal structure of these texts are even more tentative. Hintze (1960:160–161) finds the same terminal suffix *-to* in the verbs identified on the royal stele of king Taneyidamani. He also finds confirmation that there is no verbal prefix *-y* but that this sign simply corresponds with an absence of a prefix before an initial vowel of the verbal lexeme.

A study of three royal texts by Schenkel (1972), with the help of computer programming, is an interesting attempt at analyzing possible verb tenses or modes. However, the results are too dependent on the morphology of Nara with which the Meroitic verb tenses and modes are compared, and the limitation of three texts has made it open to much criticism. The valid criticism of Hofmann (1981a:214–216) has not resulted in more successful analyses in later times.

7. The Negative Marker *m-*

In the funerary inscription of the viceroy Abratoye (REM 1333), recently published by Carrier (2001c), there are three types of loot, of which one is accompanied by the nominal phrase *kdimdx*:

br / lh / 41 / ked // kdi / mdxe / 35 / anese / 25 / kelw / arohe / -bx
man / great / 41 / have killed / woman / ??? / 35 / donkey (?) / 25 / also / have
seized / 3p. obj. pron.

"I have killed 41 chiefs, I have seized 35 women ??? as well as 25 donkeys (?)."

On the basis of the unedited text, Millet (1996:612–613) already suggested the following segmentation: *kdi-m-dxe* woman-negative-give birth, that is, “women who did not give birth” or something close to “virgins.” The meanings of both *kdi* and *dxe* are without doubt. There is also no doubt that

conquerors seized young females. Nor is this kind of information absent in other stelae of Napatan kings or Meroitic ones, although the content generally reads “seizing all the women.” All these elements corroborate Millet’s suggestion.

This particular negative marker corresponds exactly, both in form and in its rare position as a prefix, with the negative found in proto-NES *m(a).

Finally, it is also not surprising that there are few attestations. The funerary inscriptions do not contain negatives, and they are difficult to spot in narrative texts, where they are probably rare as well, considering parallel inscriptions from Napatan times.

8. Coordination and Subordination

In the light of the funerary texts, it seems that Meroitic mostly uses a simple juxtaposition of clauses. There is no particular marker that seems to connect them, as is shown in the following example taken from REM 0386:

Yinqe-l-owi: Pqdye: te-dxe-l-owi: Wuniye: t-erike-l-owi: pelmos: Tetbe: yetmde-l-owi

It is Yinaqeli, Paqadaye gave birth to her, Wuniye begot her, she was the niece of the general Tetabe

There is no visible connection while all propositions that follow each other are constructed with the same predicative, which seems to exclude a possible subordination.

The same juxtaposition is found between nouns in the propositions, notably in the formulas of the descriptions of relatives:

<i>pelmos-leb:</i>	<i>apote-leb:</i>	<i>yetmde-l-o</i>
of the generals	(and) envoys	she was the niece (REM 0130)

The preceding structure is rare, but it is nevertheless possible that rather than a neutral construction, there is a rhetoric of accumulation that adds value to the person in question:

<i>Amnissxeto</i>	<i>qo: qor-o:</i>	<i>ktke-l-o:</i>
This is Amanishakheto,	she is the ruler,	she is the Candace (REM 1294)

There are morphemes that express a connection. The most common is *kelw* “and (also),” a postposition at the end of an enumeration. The majority of the known examples are found in the topicalized descriptions of relatives, such as those from Gebel Adda 39:

ml[lekeyo]se: Treye: m[leke]yose: Atoye: mlekeyose: [...]dokeye:
the *mlekeyose* Taraye, the *mlekeyose* Atoye, the *mlekeyose* [...]dokeye

*mlekey[o]se: Qoqoye: mlekeyose: Tkreye **kelw** yetmde-bese-l-o[w]i:*

the *mlekeyose* Qoqoye, the *mlekeyose* Takareye **also**, the niece of them she was.

= “she was a niece of mlekeyose (title) Taraya, etc... **and** of mlekeyose Takareye.”

When a number of people are named at the beginning of an epitaph, followed by particular nominations with *qo-wi* or *-o(wi)*, it is possible to encounter a joint nomination of which the last element is followed by a particular predicative *kelkeni*. This term is clearly derived from *kelw*, as discussed earlier, but the segmentation is subtle. It is quite curious not to find the predicative element *-o(wi)*:

*Trqmeteli: Arotnide: Yityeseyi: **kelkeni**:*

Taraqa-mete-li, Arotanide, Yitayeseyi **also** here are (?) (REM 0228)

= “Here are Taraqa-mete-li (i.e., Taraqa the Younger), Arotanide **and also** Yitayeseyi.”

VI Conclusions

Both the lexical and the morphological correspondences have left no doubt that the Meroitic language shares an origin with the Nilo-Saharan Group of North Eastern Sudanic. It is also possible to determine with precision its place within this group. In the case of phonetics, it was shown that Meroitic shares with Nubian a particular innovation that sets it apart from the NES languages. Proto-NES *l in initial position becomes /n/. In the lexical domain, it has again a close relation with Nubian since it shares nearly all lexical series that were studied, while Nara shared only half, Taman less than half, and Nyima about two-thirds of the correspondences. Some lexical innovations (for “water” and “slave”) are only present in Meroitic and Nubian. The language of the Meroites is, therefore, placed together with Nubian in a separate branch on the basis of this unity, as is illustrated in the language tree (Figure 6.1).

Proto-NES, although defined on the basis of linguistic principles, seems to have been based on a homogeneous cultural entity. The common vocabulary includes numerous terms that refer to this, such as “shield,” “to build/weave,” “lance,” “house/hut,” and “door.” It is also possible to reconstruct the creator god *Aberdi. All this indicates that the speakers of this proto-language formed a unified community, sharing a continuous geographic space. The proto-lexicon even gives an indication of the original economic system. One finds numerous terms in common for livestock, such as “sheep,” “goat,” “milk,” and, in fewer cases, “cow” and “bull.” The agricultural vocabulary is, however, rather limited. Although there is a common term for “millet,” the original sense seems to be simply “cereal” or “grain,” and there is no common term for “field,” “to irrigate,” “to hoe,” et cetera. It seems, therefore, quite likely that the people of the original community were livestock farmers rather than anything else. It is also not insignificant that the Meroitic and proto-Nubian etymology of the word “slave” goes back to the laborer of the land.

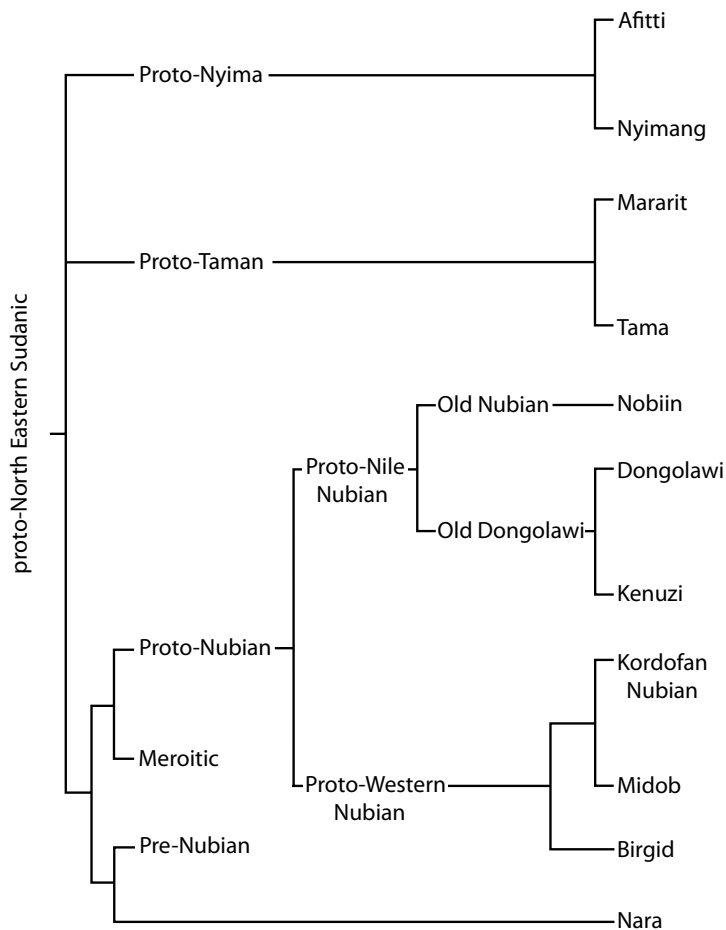


Figure 6.1: The proto-North Eastern Sudanic language tree

If the speakers of proto-NES form a distinctive community, then there remains the question of their geographical location and the circumstances of their dispersion to such a wide area, since the NES languages are nowadays spoken from Chad to Eritrea. Here also, the proto-lexicon provides guidance. As proto-Meroitic, the oldest attested branch of the NES languages, was spoken along the river Nile, one may suggest that this was also the original homeland. And yet, this hypothesis does not hold.

The vocabulary for fauna and flora is not specific for a river environment. The term for “crocodile” is, for example, adapted in Nile Nubian and in Nara from the proto-NES word for “hyena.” In a new environment, these two groups have transferred the danger represented by the jaws of this mammal to that of the most dangerous reptile. It is possible to

reconstruct the common origin for “hippopotamus” or “fish.” The simplest explanation is that these words disappeared from the indigenous vocabulary of the people living in the semiarid regions (with the exception of the Nile Nubians). But one may ask oneself whether they existed in proto-NES. The Nile Nubian word for “hippopotamus” is *erid* ~ *erit*. There exists a more recent term *essi-n-tii* in Kenuzi-Dongolawi and *aman-tii* in Nobiin meaning “cow of the river.” The latter word most probably derives from proto-Nile Nubian **iwer*-(n)-*tii* “cow of the river.” In their more recent versions, the ancient meaning “river” was replaced by “water, Nile,” *essi* in Kenuzi-Dongolawi and *ámán* in Nobiin. Although the Old Nubian form is ignored here, it is equally close to the reconstructed form **iwer*-(n)-*tii*. From this the modern Sudanese Arabic form *girinti* is derived, which is replaced in Sudan and Chad by the Classical Arabic “horse of the river,” in itself traced back to Greek. The creation of these phrases by Nubians and even the Greek is characteristic for people who encounter an unknown animal. It is given a name that expresses its resemblance to other, better known, animals. The term for fish is different for Nile Nubian, Kenuzi-Dongolawi, Old Nubian, and Nobiin, and this does not speak in favor of a shared terminology. It should be noted that the Kushites, although residing beside a river for centuries, considered the consumption of fish impure, as a victory stele of Piankhy has indicated, even though it was a common food for the Neolithic populations residing near the Nile (Honegger 2003:345).

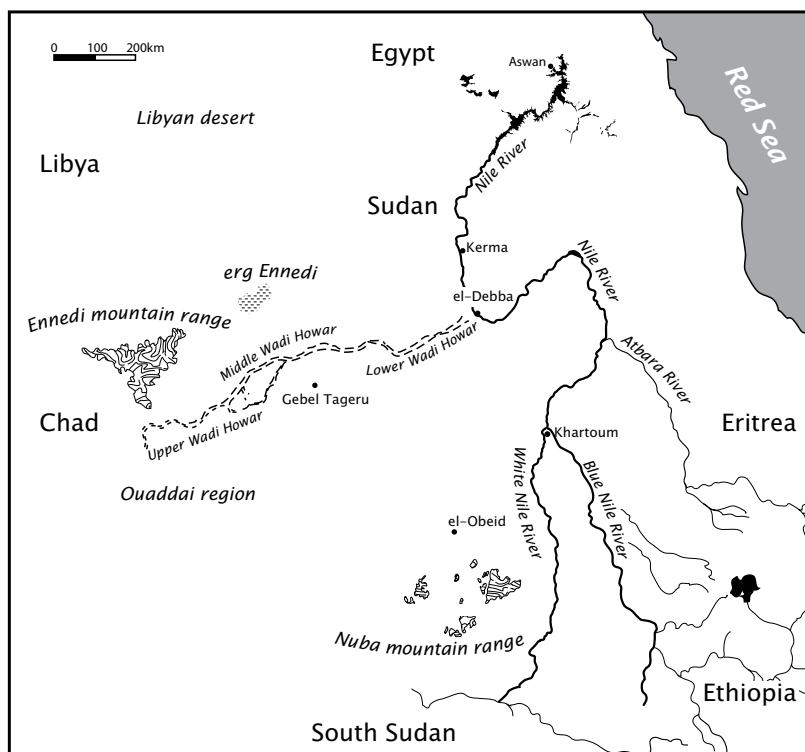
It is the same for the flora. One may reconstruct the name for the doum palm (*Hyphaene thebaica*, also known as the gingerbread tree) as **ambi*(-ti) and the jujube (*Ziziphus spina-christi* or the Christ’s thorn jujube) as **kusir*(-ti). These trees are endemic in the semiarid zones such as Kordofan from which the majority of the jujubes are nowadays sold in Sudan. In contrast, the date palm, known in the Nile valley at least since the Kerma Kingdom around 2500 BC, cannot be reconstructed in proto-NES. In Nile Nubian, its name is a loanword, probably through Meroitic and Ancient Egyptian *bnr* ~ *bny*, affected by a singulative suffix of proto-Nubian *-ti, so that in Dongolawi it is *benti*, in Old Nubian *πENTI*, and in Nobiin *féntí*. In medieval times the word traveled together with the cultivation of these palms to Kordofan and Darfur. The loan is evident in Nyima and seems to have appeared before the language was split into Nyimang (both Ama and Mandal) *fēñḍi* and Afitti *fēñḍa*. Midob presents a classic case. The dried date, an ancient export product, is a loan from Nile Nubian *péendí*, while the fresh date, undoubtedly a more recent item, is *tùmmùr* ~ *tòmmòr*, an Arabic loanword. In Tama, *tómúr* is also of Arabic origin, but the Abu Sharib use *sundu*, clearly derived indirectly from Nile Nubian with a modification of the initial that still needs explaining.

These lexical elements direct the *Urheimat* toward the Sahel region rather than the Nile. The geographic distribution of the NES languages follows the same idea. Out of the three branches of North Eastern Sudanic, Taman and Nyima are the last to split off and are found in the Darfur-Kordofan region. If the principle of least movement is followed, this would also be the area of origin for the Nubians. It is likely that here proto-NES first appeared.

It has been shown that Meroitic was the language of the elite of the Kerma Kingdom during the Hyksos era, dating back to 1600 BC, and that there are traces in the spells of the Twelfth Dynasty of the ancient Egyptians, dating to 2000 BC. The dispersal of the language family supposedly started awhile before these dates in the second half of the third millennium. It is then possible to study which event in the Darfur-Kordofan region may have instigated the displacement of the population around that time.

Recent investigations in the Wadi Howar region (the ACACIA project of Cologne University) have shown that at the time of the desertification of the eastern Sahara, between 5000 and 3500 BC, this tributary to the Nile was still flowing and attracting numerous populations, particularly from the north, before it became disconnected from the Nile in the middle of the second millennium, after which it was largely depleted and became a temporary source of water only (see Map 3). Today, only the Higher Wadi Howar, in Darfur, has seasonal water supplies. Its source lies south of the Ennedi mountain range, in Chad, at the end of which the Taman-speaking people can be found. On the other side, about twelve hundred kilometers apart, it joins the Nile at el-Debba, one hundred kilometers south of Kerma, where the great royal Kushite Kingdom was founded toward the middle of the third millennium BC. For three millennia the Wadi Howar region was occupied, if not densely populated, as witnessed by about seventeen hundred archaeological sites that have been located by the team from Cologne. It is noted that the river basin is located near Gebel Tageru in the south, erg Ennedi in the north, and the Ennedi mountain range in the west.

Three occupational periods have been defined. From 5000 to 4000 BC, phase one, the entire river had water, and the banks were occupied by hunter-gatherers who consumed both fish and shellfish. From 4000 to 2200 BC, phase two, the lower part of the wadi that was linked to the Nile dried up. The populations, given that the main part of them were from surrounding areas affected by the desertification, henceforth raised livestock, and both sheep and goats were introduced into the region. Contacts with the Nile valley are attested by finds of so-called herringbone ceramics. From 2200 until 1100 BC, the entire wadi was dry, seasonally providing water in the higher basin and some places in the center, quasi-permanently dry elsewhere.



Map 3: The Wadi Howar region

The archaeological sites are still numerous but more dispersed. The goats and sheep, more resilient than the cows, continue to play a main role. The donkey, known in Sudan since at least 2500 BC, supported the inherent displacements of this nomadic subsistence. After 1100 BC, the region ceased to be inhabitable with the exception of the high basin situated at Ennedi.

It is possible to connect these climate-related phenomena to the reconstructed history of proto-NES. Its location, between Darfur and Kordofan, as well as its chronology, fits perfectly. The development of the proto-language corresponds with the grouping of the population around Wadi Howar around 4000 BC and the adoption of a pastoral life, while the dispersion into different groups would take place after the progressive depletion of the water in the wadi. The three linguistic branches would then develop around the beginning of the third millennium BC. The Eastern branch would have occupied the still inhabitable regions farthest to the east, that is, the middle part of the wadi. With the drying up of the wadi, this branch split into three groups: Kushites, proto-Nara, and proto-Nubians. The Kushites, ancestors of the Meroites, would have traveled along the course of the Nile, where

they would have taken part in the foundation of the Kingdom of Kerma. According to the chronology of this scenario, the date of the first important settlement on the site of the future capital, known as Pre-Kerma (3500–2500 BC), appears possibly too old for these Proto-Kushites to have played a role. In contrast, the anthropological studies of the Kerma population by Christian Simon (see Bonnet 1990: 103–106) contain a strong morphological heterogeneity. Three principal groups are distinguished, indicated as A, B, and C. Group A is close to the skeletal groups of modern Kenyans, Group C is close to the Middle Egyptians near Aswan, while Group B, still distinct from C, seems to be close to the latter as well. Group C has always been present at “ancient Kerma” (2500–2050 BC), and it represents the descendants of the Pre-Kerma population, founders of the Kerma town. The new city was established a quarter of a kilometer to the west of Pre-Kerma, at the Nile. The further increase of the drought and the regulation of the course of the river had made living close to the river no longer dangerous. In any case, the necropolis lies on the site of the ancient village, seemingly indicating an ethnic and cultural continuity. The two other groups, A and B, are represented in ancient Kerma, but they seem more dominant in Middle Kerma (2050–1750 BC). The Kushites are going to be found among these two (possibly Group B only). In this case, their footprint is to be found within the village population, which explains that in the Classic Kerma time (1750–1500 BC) their language had become that of the elite and perhaps that of the entire city.

The Kushites were perhaps preceded or followed by the future Nara people in this first migration to the Nile. The Proto-Nara subsequently went along the course of the Atbara River toward the Gash region. If the hypothesis of filiation between the Nara speakers and the archaeological C Group of Lower Nubia is correct, this movement of people would be contemporary with the foundation of the new town of Kerma, in the middle of the third millennium, since at this time the C Group appeared in the archaeological record. This migration was facilitated by the contacts that existed for centuries between the cultures of the Wadi Howar region and those of the Nile, as attested by records of ceramics.

The movements of the Proto-Nubians, the third group of the Eastern branch, are more difficult to reconstruct. As argued elsewhere (Rilly 2008), it is not plausible that they ever reached the Nile prior to the end of the Meroitic Kingdom in the third century AD. On the other hand, the chronology of phonetic changes in the Nubian languages indicates that the split in the Nubian groups did not occur much prior to this date. The proximity of proto-Nubian and Meroitic, despite two millennia of separation, and Meroitic’s conservative character in relation to proto-NES are such that they

presuppose a relatively isolated position during a long period. The phonology of proto-Nubian, for instance, was not affected by influences that changed Meroitic or Nyimang phonology. It is likely that the Proto-Nubians were nomads wandering between certain still hospitable zones until the first millennium BC. Some portion of the middle part of the Wadi Howar or the valley of Gebel Tageru may have served that purpose. This mode of life may have succeeded until the third century BC, when Eratosthenes recounts that a “great people,” situated toward the west of the Nile, and the Kushites of the Napatan era erected a fortress in the Wadi Howar region, at 110 kilometers from the Nile, almost certainly to control their movement. With the desertification of the final part of the Libyan desert, they were increasingly forced to the eastern frontiers of the Kushite state, and around the fourth century AD, they overran the Kingdom of Meroe.

The Proto-Taman, the second branch of NES, may have taken refuge farther upstream of Wadi Howar. They would have been dependent on the seasonal waters, not far from the region where they are living today. If they entered other areas, there is no way of knowing, since their history is not mentioned until some centuries later. The study of Old Nubian loanwords shows that the Proto-Taman already bordered Waddai and Darfur during the medieval period, but there is nothing known of their history from the moment they separate from the other speakers of proto-NES until the Middle Ages.

The third main branch of proto-NES constitutes the Proto-Nyima, who moved south to more hospitable regions of Kordofan, but it is not possible to know in which era and in what stages this movement took place. When they entered into contact with the Nile Nubians in the Middle Ages, they were clearly a unified group and lived probably well north of the Nuba mountains. They only left for these mountains to escape the slave raids of the Arab tribes that started at some date between the fourteenth and sixteenth centuries.

A similar connection between historical linguistics and the Wadi Howar region was made, largely simultaneously, by Dimmendaal and presented as early as 2003 at the East African Workshop in Lyon and later published in two separate publications (Dimmendaal 2007a/b). However, Dimmendaal connects the entire Eastern Sudanic language group to Wadi Howar and not just the North Eastern Sudanic branch. Meroitic is erroneously given an early date of 800 BC, and various other chronological differences can be found (see Rilly 2010:407). The support for this connection largely hinges on the date of the domestication of animals in Sudan, for which Eastern Sudanic languages share important vocabulary. Since the domestication of animals did not occur in the Wadi Howar region before 4000 BC, it can be suggested either that the crystallization of proto-Eastern Sudanic took

place in the Wadi Howar or that it occurred in another place, probably farther north, and that a part of these early Eastern Sudanic speakers, already making a living by breeding cattle, entered this region around that time. This theory is ours and is the latter of two. The first, which is Dimmendaal's, would imply the entire process of crystallization of Eastern Sudanic, its division into different groups including North Eastern Sudanic, and the subsequent split of this latter branch into further groups, including proto-Meroitic, would have occurred in a time span of not more than a millennium. This seems too brief to allow for the considerable differences that can be found within the Eastern Sudanic language group. The evidence that may decide between these two scenarios will have to be obtained in future archaeological finds and, in particular, that of animal domestication in the region.

The history of the Meroitic language and script is far from complete. The task of reconstructing proto-NES and gaining a full understanding of the Meroitic language is enormous and unlikely to be accomplished by a single researcher. The languages that form the key for reconstruction and translation will not necessarily survive the next decades, and some, such as Birgid, are currently on the verge of extinction. At the same time the collection of Meroitic texts, in the *Répertoire d'Épigraphie Méroïtique*, is still ongoing, and this task is perhaps as arduous as can be the necessary linguistic fieldwork. The past chapters have shown how much but also how little can be gained from all these efforts. In the end, a summary of years of scholarship that was condensed to this single-volume book should give a solid foundation to those who wish to gain a better understanding of the ancient African language of the Kingdom of Kush.

Glossary

This list includes all the Meroitic words that have a reasonably certain translation. They are given here according to their most frequent orthography, but many of them have variant spellings, for instance, *kdke*, which are not always listed here. The phonetic renderings in brackets are still a work in progress. The vowel [ə] is a neutral “e” as in English “the”; [ŋ] is as an English “ng”; [ç] is realized as a soft English “sh”; [d] is a trilled “d”, acoustically close to [r]; [ɣ] is similar to Spanish “j” in Juan or English “ch” in Loch Ness.

<i>abese</i> [əbeçe]	gazelle
<i>abore</i> [ambur]	elephant
<i>abr</i> [əbara]	man (male)
<i>ant</i> [annata]	priest (< Egyptian)
<i>apede</i> [əbede]	Creator
<i>apote</i> [upute]	envoy (< Egyptian)
<i>ar</i> [ara]	boy
<i>are-</i> [ar]	to take, to receive
<i>ark-</i> [arak]	to plunder, to raid
<i>asr</i> [əçara]	meat, animal
<i>at</i> [utta]	bread
<i>ato</i> [attu]	water
<i>bohe-</i> [buŋɣwe]	to rule
<i>dime</i> [dim]	cow
<i>dmkte</i> [damakat]	offering
<i>dx-</i> [daɣe]	to give birth
<i>erike-</i> [erikə]	to beget
<i>he</i> [ɣwe]	drink
<i>hr</i> [ɣwara]	north
<i>kdi</i> [kaɖi]	woman
<i>kdite</i> [kaɖit], <i>kdise</i> [kaɖiç]	sister
<i>kdke</i> , <i>ktke</i> [kandake]	Candace, queen mother
<i>ked-</i> [keɖa]	to slaughter, to kill

<i>kelw</i> [kelawa]	also
<i>(e)l-</i> [(e)la]	to give
<i>lh</i> [lanɣwa]	big, great, older
<i>mdxe</i> [madaɣe]	virgin (adj.)
<i>mete</i> [məte]	younger (< <i>mte</i>)
<i>mhe</i> [maɣu]	abundant, many
<i>mk</i> [maka]	god, goddess
<i>mlo</i> [malu]	good, beautiful
<i>mlowi</i> [malui]	good health
<i>ms</i> [maça]	sun
<i>mte</i> [mate], <i>mse</i> [maçe]	child
<i>nbr</i> [nabara]	gold (< Egyptian)
<i>nob</i> [nuba]	slave, hence Noba (Nubian language speakers)
<i>nse</i> [naç]	sacrifice
<i>ntke</i> [natake]	strength
<i>pelmos</i> [balamuça]	general (< Egyptian)
<i>perite</i> [bərit]	“agent,” bursar of a temple (< Egyptian)
<i>peseto</i> [bəsentu]	viceroy (< Egyptian)
<i>pete</i> [bette]	snake
<i>pi</i> [bi]	place
<i>pqr</i> [bakwara]	prince
<i>pwrite</i> [bawarit]	life, strength
<i>qebese</i> [kwəbəç]	their
<i>qelile</i> [kwəlil]	necklace
<i>qese</i> [kwəç]	his, her
<i>qo</i> [kwu]	this one, this
<i>qore</i> [kwur]	ruler (king or queen)
<i>qoresem</i> [kwurçema]	royal consort
<i>sdk</i> [çaɖaka]	travel, journey
<i>se</i> [çe]	each
<i>sem</i> [çema]	wife
<i>ssor</i> [çaçura]	scribe (< Egyptian)
<i>st</i> [çata]	foot, feet
<i>ste</i> [çate]	tutor, hence “mother”
<i>tdxe</i> [tadaɣe]	child (of a mother)
<i>teneke</i> [tenekə]	west
<i>telepi</i> [teləbi]	granary, large pot for grain storage
<i>tewiseti</i> [twiçti]	adoration (< Egyptian)
<i>tke-</i> [tak]	to love
<i>tkk-</i> [takaka]	to plunder, to raid
<i>tlt</i> [talanta]	talent, unit of weight (< Greek)
<i>tmey</i> [tamia]	white person (< Egyptian?)
<i>tre-</i> [tar]	to give, to offer

wide [wid] (*wi-* before consonant)*wle* [wal]*xlbi* [ɣalabi]*xr-* [ɣara]*xrpxne* [ɣarabayan]*yed* [edə]*yer* [era]*yetmde* [etamadɛ]*yireqe* [irku]*yirewke* [irəwak]

brother

dog

bull

to eat

governor (< Egyptian)

silver (< Egyptian)

milk

nephew, niece (younger individual in
the maternal lineage)

south

east

Names of Deities*Amesemi* [əmesemi]*Amnbse* [amannabaɕ]*Amni* [amanai]*Amnote* [amannute]*Amnp* [amanaba]*Amnpte* [amannabatte]*Apedemk* [əbedɛmaka]*Aqedise* [akwədɪɕ]*Ar* [ara]*Aritene* [aritene]*Asori* [uɕuri]*Atri* [atarai]*Ms* [maɕa]*Mt* [mata]*Wos* [wusa]

Amesemi (Apedemak's consort)

Amun of Pnubs (< Egyptian)

Amun (< Egyptian)

Amun of Thebes (< Egyptian)

Amun of Luxor (confused with the
following) (< Egyptian)

Amun of Napata (< Egyptian)

Apedemak (Lion god)

Khons, also lunar form of Amun

Horus (< Egyptian)

Aritene (perhaps local name of
Ra-Harakhty)

Osiris (< Egyptian)

Hathor (< Egyptian)

Mash (Sun god)

Mut (< Egyptian)

Isis (< Egyptian)

Place-names*Aborepi* [amburbɪ]*Adomn* [adumana]*Akine* [akinə]*Arome* [ərume]*Atiye* [addai]*Bedewi* [bedəwi]*Dor* [dur]*Medewi* [medəwi]*Nlote* [nalutə]*Npte* [nabatə]*Pedeme* [bedɛmə]*Phrse* [baɣwaraɕ]

Musawwarat es-Sufra

Arminna

Lower Nubia

Rome

Sedeinga

Meroe (earlier *Medewi*)

Derr

Meroe (later *Bedewi*)

Karanog

Napata

1. Qasr Ibrim; 2. Amara

Faras

Pilqe [bilaku]*Qes* [kwəça]*Qomo* [kumu]*Sye* [çai]*Tene* [tene]*Tbx* [tabaɣa]*Tebwe* [təbawe]*Tolkte* [tulakat]

Philae

Kush

Egypt (< Egyptian)

Sai Island

Shablul

El-Hassa (Giblab)

Abaton (island close to Philae)

Naga

List of the Rulers of Kush

This list, which has been recently edited from various sources (especially L. Török in *Fontes Historiae Nubiorum*), does not claim to be definitive. New names will certainly emerge through future excavations. Rulers are male, unless “Queen” (the famous Candaces) is specified. Italics are used for rulers known, so far, only by their coronation names in Egyptian. Missing signs in incomplete names are represented by dots in brackets.

First kings of Napata

Five generations of unknown
rulers
Alara (before 766 BC)
Kashta (?766–753 BC)
Piankhy (753–721 BC)

Malonaqen (1st half of 6th century
BC)

Analamoye (mid-6th century
BC)

Amani-nataki-lebte (2nd half of
6th century BC)

Amanikarqo (2nd half of 6th
century BC)

Amaniasbarqo (late 6th–early
5th century BC)

Siospiqo (1st half of 5th century
BC)

Nasakhma (mid-5th century
BC)

Malowiamani (mid-5th century
BC)

Talakhamani (2nd half of 5th
century BC)

Amannote-erike (2nd half of 5th
century BC)

Baskakeren (2nd half of 5th
century BC)

Harsiyotef (1st third of 4th
century BC)

25th Dynasty

Shabaqo (721–706 BC)
Shabataqo (706–690 BC)
Taharqo (690–664 BC)
Tanwetamani (664–?656 BC)

Kingdom of Napata

Atlanersa (2nd half of 7th century
BC)
Senkamaniskén (2nd half of 7th
century BC)
Anlamani (late 7th century BC)
Aspelta (late 7th century– early 6th
century BC)
Aramatelqo (1st third of 6th
century BC)

Akh-Aritene (mid-4th century BC)
 Amanibakhi (2nd half of 4th century BC)
 Nastasen (2nd half of 4th century BC)
 Aktisanes (late 4th century BC)
 Aryamani (1st half of 3rd century BC)
 Kash[...] (1st half of 3rd century BC)
 Piankhy-erike-qo (1st half of 3rd century BC)
 Sabrakamani (1st half of 3rd century BC)

Kingdom of Meroe

Arkamani I (Ergamenes) (mid-3rd century BC)
 Amanislo (mid-3rd century BC)
 Amanitikha (2nd half of 3rd century BC)
 Šsp-‘nh-n-Jmn Stp-n-R’ (2nd half of 3rd century BC)
 Arnekhmani (2nd half of 3rd century BC)
 Arkamani II (late 3rd century-early 2nd century BC)
 Adikhalamani-Tabirqo (1st half of 2nd century BC)
 [...]mr[...]t (1st half of 2nd century BC)
 Queen Nahirqo (mid-2nd century BC)
 Taneyidamani (late 2nd century BC)
 Pa[.]khedateqo (1st half of 1st century BC)
 Naqyrinsan (1st half of 1st century BC)
Horus k3-Nḥt (mid-1st century BC)
 Aqrakamani (2nd half of 1st century BC)
 Teritegas (late 1st century BC)
 Queen Amanirenas (late 1st century BC)

Prince Akinidad (late 1st century BC)
 Queen Amanishakheto (1st half of 1st century AD)
 Queen Shanakdakhete (1st half of 1st century AD)
 Queen Nawidemak (1st half of 1st century AD)
 Amanakhabale (1st half of 1st century AD)
 Queen Amanitore (mid-1st century AD)
 Natakamani (mid-1st century AD)
 Prince Arikankharor (mid-1st century AD)
 Prince Arakakhatani (mid-1st century AD)
 Prince (King?) Shorkaror (mid-1st century AD)
 Amanakhereqerema (late 1st century AD)
 Amanitenmomide (1st half of 2nd century AD)
 Queen Amanakhatashan (1st half of 2nd century AD)
 Amanitaraqide (2nd half of 2nd century AD)
 Aryesbokhe (2nd half of 2nd century AD)
 Tarekeniwal (late 2nd century AD)
 Aritene-yesbokhe (late 2nd century/early 3rd century AD)
 Takideamani (1st half of 3rd century AD)
 Teqorideamani (mid-3rd century AD)
 Tamelordeamani (2nd half of 3rd century AD)
 Talakhideamani (late 3rd century AD)
 Yesbokhe-Amani (1st half of 4th century AD)

Appendix

The following appendix contains two hundred terms used for the comparison of the languages within the North Eastern Sudanic (NES) language group. It is not limited to a list of cognates but facilitates an etymology of each term. The reconstructed forms of each group within North Eastern Sudanic are also provided and are the result of comparisons a full discussion of which is beyond the scope of this volume but can be found in Rilly (2010:420–529).

The reconstructions for proto-NES are of three kinds. Level ① is based on three branches: Eastern (which includes Nara and Nubian), Taman, and Nyima. The second level, ②, uses only two of these branches, while the third level, ③, is reconstructed only with the help of the Eastern Group.

The entries under Nara were taken from Reinisch (1874), Thompson (1976), Bender (1968), Hayward (2000), or Abushush & Hayward (2002) or collected by Claude Rilly in 2006. Where appropriate their reference is added using the initial(s) of their name: R, T, B, H, AH, and CR, respectively. Tones on liquids such as /l/, as suggested by Hayward, are written after the sign (e.g., l'). The various dialectal differences, if known, are indicated with a lowercase initial: h (Higir), m (Mogoreeb), k (Koyta), and s (Saantoorta). Most of these differences were collected by Claude Rilly with informants in Eritrea and France.

The proto-Nubian entries include those from Kenuzi-Dongolawi (KD), where the Kenuzi dialect (K) and Dongolawi dialect (D) may be different. “East” and “West” indicate variations found geographically in reference to the Nile. The proto-Taman and proto-Nyima forms are not always certain and frequently absent. Few forms were taken from references other than Rilly 2010, but, if so, these sources are mentioned. Dialects are not abbreviated. The possibility of a loanword from Arabic, NES, or other languages is indicated as well.

In the reconstructed forms, a capital letter indicates an approximate phoneme, for instance, *N for either *n, *ɲ, or *ŋ. Similarly, *V indicates an unknown vowel, and, since the consonant /v/ is not known for NES languages, it should not be confusing.

1. TO SLAUGHTER, TO CUT UP

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
Ⓐ *ɣkod-	kòd- to cut (a tree), to cut up kàd- to slaughter, to cut (CR)	*ɣodd- to cut up (expressive gemination?) *goj- to slaughter	*kíd- to cut (Tama)	-

2. TO BUY, TO CARRY AWAY

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
Ⓑ *tol-	tol- ~ dol- (R) tòòl- (CRh) tòòr- (CRs) (see TO GATHER, TO TAKE)	*jaan-	-	*tar- to buy

3. TO LOVE, TO WANT

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
Ⓑ *tor-	sol- (R, T) sòòl- (A)	*oon- (see TO HATE) *doll- (East)	tár- (Tama)	-

4. TO GO, TO WALK

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
-	al- (R, T) àll- (A) hàr- (CRm, s)	*juur-	*log- (?) suppletive complex conjugation	*tər *ko

5. BITTER

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
Ⓐ *ɣkar-	kèén-kù (CRh) kèéɣɣè-ù (CRm)	*ɣadd-i ~ *ɣard-i	*kuur-	*kar-

6. DONKEY

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
③ *karg-i	hòrgè (R, T, A) pl. horgeta (R), hòrgèttà (A)	*kaj-i ("horse" in KD, Birgid and NK) *ondi < *on-ti ? (KD and NK)	*lel or *len (< Fur <i>lèlèl</i> , cf Jakobi 1989)	–

7. TREE, WOOD

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
③ *tum- wood	tüm tree,	*koor-i tree	*gaan tree	*tuma tree,
③ *koper- tree	wood (R) tüm wood (CR) kël tree (CR)	*ber- wood	*kipe(-ti) (?) burnt wood	wood

8. TO SIT, TO STAY

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
© *teg- to sit	tat ~ dat to sit or	*ti(i)g- or *te(e)g- to	*juk- to sit, to stay	*dɔ̃p to sit, to
① *daŋ- to sit,	to be sitting (R)	be sitting	(only in Tama and	stay
to stay	tàât- (CRh, k) tààs- (CRm, s) dengi to stay (R) dàŋŋí to wait (CR)	*áag- to stay, to be sitting	Miisiirii)	*tíg- to stop (< NK ?)

9. BLIND

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
③ *dung-	hàrbèè-gù (CR)	*dúg(-ur)	*(h)ombu	loanwords from NK

10. TO BATHE, TO SWIM

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
–	hát-âg- to bathe (CR) bùŋ- to swim (CR)	*eeb- *(e)b-Vr- (see TO WASH)	*eeg- to wash something	?

11. STICK

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
© *kol-	kúra (CR)	*kol- (?)	*dog(ul)-	*dòg
③ *dog-				

12. WHITE

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
③ *ar-	èrèén-kù (A)	*arr-e	*e(e)-k < *er-k ? (suffix adj. -k, see BLACK , RED)	*ṭà-bár-

13. WOUND

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
© *kor-	kót swelling, abscess, wound (R, CRh) kódí (CRm, s)	*koor- (East) *kool- (West)	–	loanwords from NK

14. TO DRINK

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
④ *li-	l- to drink (T, CR) íf-tò the drinking (CR)	*nii-	*li- ± extension -*jv	–

15. GOOD, BEAUTIFUL, SOFT

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
④ *mel- ~ nel-	hàggùk-kù good (CRh) lèè well (R, T, CR) mílóól-kù smooth, soft (B, CRh, k)	*gen *e(e)l- (preserved in Midob, but see BAD)	*dii good, healthy	–

16. MOUTH

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
④ *agil ~ *agul	aùlò (R, CRh), pl. aùl-lá (R) àgúrá, pl. àgúr-tà (CRs)	*agil	*auli (preserved in Mararit, elsewhere *kul (?), cf. HOLE or WELL , but tone and aperture are different)	*ḡal-

17. SHIELD

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
③ *kar-	kodo, pl. kotta (R) kédó, pl. kédóttà or kèttà (CR)	*kar- (cf. Egyptian <i>qrw</i> ?)	–	tVr- (?)

18. TO BURN, TO MAKE A FIRE

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
① *wul-	kál- (CR) war to burn (R) wôr- to roast (CR)	*urr- (< ? *ul-r- , cf. proto-Nubian *ule , sg. *ul(e)-di charcoal)	*wer- to make a fire	*k-us- or *t-us- to make a fire, to burn *wul- (?) to boil

19. THAT (OVER THERE)

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
① *te	te , pl. tegu (R, T) têé (H, CR) (see HE, SHE)	*te (in the east replaced by *man , preserved in the 3p pers. pronoun)	–	–

20. THIS (OVER HERE)

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
① *in	yi , pl. yigu (R, T) yîi , pl. yîgû (CRh, k, s)	*in	*iŋ	*nV

21. ASHES

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
② *agur (sg. -ti)	hûbet (R) hibîd (CRh, k)	*uburti	agurŋo (?) (-ŋo < collective suffix *-go ?)	*finan

22. TO SING

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
③ *or-	wúsá (B) héèn or héès- (A, CRh) wôr- (CRm)	*oor- *ɔr- (Jakobi & Kossmann 2001)	*or- (?) (ɛr- in Tama because of vowel harmony? see TO TAKE (AWAY))	–

23. WARM

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
④ *dog-	dog (R)	*jug- (East and Midob)	*kaidi (< *kagidi ?)	–
⑤ *kag-	tógáák-kù (CRh) dâwwú-gù tepid (CRh) ôf-kò (AH)	*ooŋ (West)		

24. HORSE

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
–	fàrà (R, A), pl. fart-ta (R) fàràttà (A) (< Arabic <i>fars</i> ? but see Taman)	*mur-ti (loan from Meroitic <i>mre-ke</i> , with singular suffix added?) Elsewhere it is proto-Nubian DONKEY *kaj	*furta (< Old Nubian and not Arabic)	*mərɿV (< Old Nubian)

25. HAIR

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
Ⓐ *sugir (sg. -ti)	sebi (R), sabi (T) sàbì , pl. sàbá (A)	*del(-ti) *sugir KD and NK	*sigit	*i(g)é *jE (?) (Bender 2000)
Ⓒ *del- (sg. -ti)	traditional bun (R) jè ~ dè (CRh) dèè (CRm)			

26. GOAT

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
Ⓔ *bel-	bile ~ bèlè , pl. bèl-là (R, A, CR)	*bel(-ti)	*bil	*kund- (?)

27. DOG

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
Ⓑ *wus-i	wòs , pl. wòsà (R, A, CRh)	*wel	*wuus-i	?
Ⓑ *wel	wùçì (CRm, s)			*gil (?) (Bender 2000)

28. SKY (see also RAIN)

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
Ⓐ *(ɣ)ar-	nèrè (R) nàrà (A, CRh, m, s) nòòrà (CRk)	*ár- ± extension	*(ɣ)ar- ± extension	*ar- + extension

29. FIVE

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
–	oíta (R) wiíta (T) wíítàà (H) wúduúútà (CRm, s)	*diji, *dijji (West) (see HAND)	*masi	*mul

30. HEART

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
Ⓐ *as-mil heart	àsmà, pl. asemta (R)	*asil West also has	*samil	*ṭil-um (cf. nara and
Ⓑ *ṭil- liver (?)	àsĩmtà (T, A) ṭĩlĩ liver (CRh)	*asil-(n-)di (diminutive)		Old Nubian)

31. TO BUILD, TO BRAID

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
Ⓐ *kop- or *gop	kùs, imper. kùn (R, AH)	*gop	*gun-	*ṭog- *kog-

32. ROPE (see also TO BIND)

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
Ⓑ *(ŋ)er-	sùmà (CRh) ʃimà (CRm) hadi to attach (R) hádá- (A)	*err-i	*(ŋ)arugun	*kur- (?)

33. HORN

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
Ⓐ *ŋes- ~ *ŋer- (sg. -ti)	kelli (R) kèl'ñ (H) kèllĩ (CR) kéttĩ (CRk)	*ŋees-i, sg. *ŋes-ti	*ŋe-ti	*gur-ṭi

34. BODY (see also TEN)

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
Ⓐ *mer- ~ *per- (sg. -ti)	eiti, aite (R) eítà (CRh) íccà (CRm)	*e(e)r-i (uniquely preserved in the West but see TEN)	*mer(i)-ti	–

35. NECK

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
④ * eb-ε (sg. - ti)	hàbè (R, CRh), pl. habe-ta (R) hàbèttà (CRh) hàibè (CRm, s)	* ebe ~ * ee	* (s)ebe-ti	* beṭV * bEṭ- (Bender 2000)

36. TO CUT

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
④ * kəd-	ked (R) kàd (T, A)	* mer-	* kid-	–

37. TO GATHER, TO TAKE

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
④ * dəm-	nem- (R) nəm- (B) nàm- to take, to capture (A, H)	* dumm- * dol- (see TO BUY)	–	–

38. TO DANCE

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
④ * bal-	bàl- (A, CRh, k) bàr- (CRm, s)	* baan- (? after KD and NK)	–	* ṭe-bal- or * fal

39. TO ASK

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
④ * is-ger	eṣ-ei (R) iṣ (T) iṣ-ǣg- (CRh, k) ṣg- (CRm, s)	* is-kir (< *is “which?” + *ger, auxiliary factitive)	* isk- ~ * usk-	–

40. TOOTH

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
④ * gesil (sg. - ti)	nihì , pl. nihit-tá (CRh) nèṣi , pl. nèṣá (CRm)	* gil , sg. gíl-di	* gesi-t(i) , pl. * ges-oṅ	* gil-

41. TO GO DOWN, TO DESCEND

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
③ *sur-	ball- (T) bàl- (CRh) (see TO LEAVE) sáw-àg to pass (CRh)	*sukk- (< *sur-k- ?)	*sur- (?)	–

42. TWO

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
④ *ar-i	before a noun: are (R) àrí (CRh) after a noun: arega (R) arriga (T) àrigà (CRh)	*orr-u (< *arr-u)	*wari (< *ori ?)	*arma(g)

43. CREATOR DEITY

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
③ *aber-di	èbbéré (R, CR) ibberi (Salt 1814)	*ebed- (preserved in NK and Nobiin ?)	Arabic loanword	–

44. TO SAY (see also LANGUAGE and TO SPEAK)

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
③ *wəl-	wól-àl (R, CR)	*wee-	*an-	–
③ *man- (?)	wal- (T) wəl- to speak (B) màn- (CR)	*an- (+ suffix *-k in NK and Midob)		

45. TO DIVIDE

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
④ *bag- to divide	wagi , pl. wagita part (R, today not recognized) bìjítì part (CRh)	*baag-	*bak to split	*bV-

46. TEN

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
Ⓐ *adi-mer “set of hands” or *mer “body”	lefek (R) lúfúk (T, CRh)	*di-mer ± -n *ir (cf. *er-i body)	*mer or *tok	–

47. TO GIVE

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
Ⓐ *te(n)-	nin (R)	*deen- (to me, us)	*ti(n)-	*tVg-
Ⓒ *den-	néè I give + obj. sg. nínè I give + obj. pl. (CRh)	*tir- (other people)		*tśŋ give me

48. TO SLEEP, TO LIE DOWN

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
Ⓑ *ɣer- “to sleep”	notei to sleep (R, unknown today)	*ɣèer- *ti(i)g- or *te(e)g- to be sitting down (see TO SIT)	*ɣar- or *a(m) ba- (different verbs or with an opposite aspect?)	*tug- or *tuŋ
Ⓑ *tug-	nààgà sleep (R, CR) tàb- to lie down, to sleep (H)			

49. BACK (N)

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
–	gǔmbà (CRh, k) sillàá (CRm, s)	*jer (East and Midob) *maŋ- (West)	*(a)na(g)- (?)	–

50. (AT THE) RIGHT

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
–	hamma-ko (R) hàmmàá-kkù (CR)	*usi-n-(gor) , lit. “the sorghum side” (mostly used for eating)	*owu-ged	–

51. WATER

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
Ⓓ *mba-n (or *mba-ŋ ?)	emba (R) mbàà (CR)	*es(-ti) ~ *os *Vs-tV (Jakobi 2004)	*kal or *kaal	*bój

52. ELEPHANT

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
Ⓐ *angur	kùrbè , pl. kùrùb-tà (CR) (< Beja <i>k^wirib</i> , Blemmyan κυρβε)	*angur (lost in the East; only West *angul is preserved)	*aḡor ~ *aḡgor	*Vr-

53. TO TAKE (AWAY)

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
Ⓐ *ar-	see TO TAKE, TO LIFT	*aar- to take	*ar-i (suppletive form of *iñ “to take,” see TO TAKE, TO LIFT)	*ṭ-ur or *ur to take away

54. ENCLOSURE, ZERIBA (DEFENSIVE ENCLOSURE)

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
–	kor village (R, no longer known) iràáb enclosure or thorns (CR)	*kar(-ti)	–	–

55. CHILD

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
© *ti or Ⓑ *tɔd- , pl. Ⓑ *topi	di , pl. deta , dade (R) tíí , pl. taáda (T, H, A)	*too-di , pl. *too-pi (vestigial form together with *ti , see SISTER)	*taat *maata or *maasa boy	*ḡV

56. TO GIVE BIRTH TO, TO MOTHER

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
Ⓑ *ar- Ⓐ *sun-	tal- to mother, to farrow (R) tàláa parent (father or mother) (CRh) tâl- to farrow (CR) tàb- to mother, lit. “to lay down (tr.)”	*ir- (see also STERILE) *us-k- (KD and Midob, perhaps originally “to put down,” cf. proto- Nubian *us-kir)	*in-	*suḡ to give birth, to beget *ar- pregnant

57. TO HEAR

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
–	wós- (R, A) (< *wón-s, imper.) wónnì (CRh) wóhì (Crm)	*gijer (contains an auxiliary factitive *ger assimilated?)	*sig-	?

58. TO ENTER

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
③ *tor-	nûl- (R, T, CRh, k)	*toor-	–	*ul- *tər or *kot- to come

59. THORN, POINT

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
④ *kar- (sg. -ti)	kere, ker (R) kèèr , pl. kéèrà (A)	*kándi *num- (West)	*gir-e , sg. *giri-t(i)	*orðu

60. SLAVE

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
–	sabi (R) sáábí (A) (< Tigré)	*nogu , sg. *nogu-di *nog-di (AJ)	–	–

61. STAR (see FLY)

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
④ *wije (sg. -ti)	wini , pl. wintita (R) wíínì , pl. wííná (CRh) úni , pl. úná (CRk) hóntì , pl. hóntígá (CRs)	*ope ~ *wije , sg. *op(e)-di ~ *wip(e)-di	*mije , sg. mije-ti	–

62. TO BE

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
④ sg. *(a)n- , pl. *(a)g-	ne- (R) n- (T, A, AH) nù he is gà (CRh), gè they are (CRm,s)	*-a(n) , pl. *-a-gV (copula)	*an- , pl. *ag-	*nV

63. EXCREMENT

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
–	ɪʃ, pl. ɪʃá (R, CRh, k) ɪʃí, pl. ɪʃá (CRm, s)	*uɲpi	*gesi	*ɲigul

64. HUNGER, TO BE HUNGRY

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
–	öbere (R) èbééré (CRh, m) àbúré hunger (CRs)	?	*(a)ɲos- (?) hunger	*kunuɲ (see MEAT)

65. TO DO

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
–	ai (R) aî- (T, CRh, s) áù- (CRm)	*aar- *eer- (West)	*en-	–

66. WOMAN, WIFE

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
⑧ *kar-i ~ *kad-i ⑧ *il	ánìn woman (same as MOTHER) toko (H) tòòkkù (H, CR), pl. wula (R) wùlàà female, wife (CR) kede, pl. ketta sister (R) kàdè, pl. kàttá (CR) (see also DAUGHTER)	*il-di *kar(r)i female	*i(r) (*r radical confounded with the determinant *-r), pl. *iriɲ	*kàrí

67. IRON

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
–	keʃin (R) kâʃiɲɲé (CRh) (< Tigré) dábá (CRm, s)	*ʃar-ti ~ *sar-ti (loanword that probably spread toward the west afterward)	*ari (?)	–

68. FIRE

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
③ <i>*usi-gu</i>	<i>ʃitta</i> (R) <i>ʃítà</i> (B, CR) <i>ʃetta</i> (Salt 1814)	<i>*usi-gu</i> (collective suffix; *-s- often dropped)	<i>*usi</i> (± collective suffix <i>-gu</i>)	<i>*mér</i>

69. DAUGHTER

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
–	<i>dongadi</i> (grand) daughter (R) <i>dònggòdi</i> (CRk) <i>dòngòr</i> (CRm)	<i>*as</i> daughter (sometimes confused with: <i>*as-ti</i> granddaughter, “child of a daughter,” see CHILD)	Same as CHILD <i>*as-</i> sister (< Old Nubian?)	Same as SON

70. SON

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
① <i>*ɣar</i>	Same as CHILD <i>kàr</i> , pl. <i>kàrínná</i> brother (from the viewpoint of the sister) (CR)	<i>*ɣar</i> <i>*gaad</i> (Jakobi 2007)	Same as CHILD <i>*ɣar</i> brother (from the viewpoint of the sister, see BROTHER)	<i>*ɣV-</i> child, son (with dimin. -iŋ and dissimilation n_ŋ in Nyimang)

71. STRONG (1)

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
③ <i>*bor-</i> (or <i>*bog-ir</i>)	<i>bor-ko</i> (R) <i>bor-ku</i> (T) <i>bóórku</i> (CRh) <i>billèè-ù</i> (CRm) <i>borʃi</i> (R) <i>bóórʃi</i> strength (CRh)	<i>*beer-</i> (only in the East)	see STRONG (2)	see STRONG (2)

72. STRONG (2)

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
① <i>*kug-ir</i>	<i>həbár-kù</i> thick (B) <i>hàbâr-kù</i> large, fat (CRh)	<i>*kugur</i> ~ <i>*ugur</i>	<i>*kiir</i>	–

73. ANT

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
Ⓐ *kor-	holki (R) hóólkí (CRh) wáálké (CRk) wórgí (CRs)	*goor or *koor	*kirge , sg. *kirge-t(i)	*kurumV

74. TO HIT

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
Ⓒ *ter-	ter- (R, T, A) tèr hit! (AH, CRh) dàn- (CRk, s)	*toog-	–	–

75. BROTHER

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
Ⓑ *wer- ; Ⓑ *bis-an younger brother	ánìntù sibling (lit. “child of the mother”) (CRh, k) bìssà , pl. bìssànná younger brother (CR) kàr , pl. kàrínna brother (from the viewpoint of the sister) (CR)	*wer-i (preserved in Birgid and in “friend,” elsewhere replaced in the East by *eenggar < *een-gaar , lit. “son of the mother”) *een-n-gaad (AJ) *bes(-an) younger brother (AJ)	*gar brother (from the viewpoint of the sister, see son) *bit(-an) younger brother	*(iḡ-V-) ḡV “child of the mother”

76. COLD, WET

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
Ⓑ *nep-	nen-ko (R) nèén-kù cold (adj.) (CRh)	*or-og-i cold *nep-i wet (complex forms in NK and Birgid)	*sut- or *sun- (same as “wind”) *nepige cold (multiple forms)	–

77. SMOKE

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
Ⓑ *tul-i (sg. -ti) (?)	asero (R) asuru (B) àsóró (CRh)	*gusin-ti	*tulut	?

78. (TO THE) LEFT

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
–	sera (R) sèèrà (CR)	*ḡiḡ-gor (?) (perhaps from *uppi-n-gor “side of the excrements,” mainly used for cleaning oneself; see RIGHT for a parallel.)	*kugi-ged (?) (see RIGHT)	–

79. KNEE

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
Ⓔ *kur (sg. - ti)	gumbe (R) (< Beja ?) gùbdà (CRh, k) gùbàrtá (CRm, s)	*kur-ti	*kur-t(i)	*kupum

80. FAT, BODY FAT

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
Ⓒ *des-	kassa (R) kàsà fat (AH) (cf. Nubian MEAT) déèt oil (CR) (loanword from Arabic <i>zayt</i>) des to be satisfied/sated (R) desse (R) dàsè satiation (CR)	*des fat, abundance	*dVdi (?) fat	*kól fat *pum oil (loanword from Nile Nubian)

81. BIG

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
Ⓐ *dag-u	dub-ko (R, T) dùb-kù (CRh) dàb-kù large, big (CRs)	*dag-i – *dag-ul *ḡoor- (see OLD)	*dawud-	*duga

82. GRANDMOTHER

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
Ⓑ *awo	afo (R) ààfó , pl. ààfónná (CR)	*awa (?) *ab- (AJ)	–	–

83. TO HATE, TO REFUSE

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
–	wôt- (R, CR)	*mon- (<*m-oon-negation + “to love,” see TO LOVE)		*d(V)r-

84. GRASS

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
	halme (R), hèlmè fodder (CR)	gis-e , sg. gis(i)-ti (intervocalic *s follows Midob, see WATER)	*teri (see TO SEED , GRAIN)	?
	sum (B)			
	súm (H)			
	sũm (CRh)	*mand- or		
	ʃimí (CRm)	*mond- (West)		

85. YESTERDAY

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
③ *ɔl-e	allegi , allage (R) àllàgí (CRh) àlláà (CRm)	*ool-e ~ *wiil-e (see STAR for the alternation given for proto-Nubian)	*ore	*méV

86. MAN (MALE), HUSBAND

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
③ *kur	abu-ko (R) man	*ogoji ~ *ogiji	*ma	–
③ *agur	(male)	husband		
	àbìn , pl. àbbinná (A) (cf. FATHER)	(compound word, relatively stable)		
	ku (R)	*kur man (< ? proto-Nubian		
	kúú (AH), pl. kua (R)	*gur disappeared in the East)		
	kwàà person, man (male) (H)			
	abta , abda husband, wife (R)			
	àbtà husband (CRh)			

87. GUEST

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
–	hömet (R) èmèt , pl. èmènàà (CRh) ìmintí (CRm, s)	*isker , sg. *isker-ti (see TO ASK)	–	–

88. EIGHT

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
–	dissena (R) déssànàà (CR)	*idiwi ~ *iduwi (composed of two unknown elements)	*kimis (cf. Nubian FOUR)	–

89. HYENA, JACKAL

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
① *alum hyena	kodil (R) kùdùl' (H)	*aal-um hyena (crocodile in Nile Nubian)	–	*olum
① *mog-ur dangerous beast	kùdũl hyena (CR) àálmà crocodile (CRh)	*mogur jackal, dangerous beast		

90. HE, SHE

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
① *an	több (R) tib ~ téb (T, CR) dative or gen. te (R, T), téé (CR)	*te ± determinant -r (East and Birgid) *on (?) (only in Midob, this turned into a dem. THAT retaining an older form) *ten(na) gen.	*an (innovation in Tama in the nominative) *an-u gen.	*an- *an-ugu gen.

91. THEY

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
① *an-gi	tōba (R), tiba (T), ṭibá (H) (< *teg-go , earlier form of the accusative?) teba dative (R) ṭibōō (T, CRh) téé gen. (CR) (see other proto-Nubian dialects) tèbá (CRk) àtáb (CRm) àtám (CRm)	*ti ± déterminant -r (East and Birgid) (< *te-gi (?) changed into a dem. THAT) *on-gV (?) (only in Midob, retention of an old form) *tin(na) (< *te-gi- n(na) gen.)	*aniḡ (innovation in Tama) *a-g-un gen.	*an-gi *an-w-uḡ (?) gen.

92. I

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
① *a(-i)	ág (R, T, CR) (earlier form of the accus. *a-ga ?) o (R) wo (T) wóó dative or gen. (CR) Other dialects: ájù (CRk) áá (CRm) ágá (CRs)	*a-i *on(na) gen. (East: *a- by attraction or an analogous change)	*wa , gen. hon(a) (*wa < *o analogous to the gen. ?)	*aí *o-uḡu gen.

93. TO THROW

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
-	ban- or bas- (R) báân- or báás- to throw, to reject (A) saw- (CRh, k) hákk- (CRm) háug- to throw to (CRs)	*wir- with suffix *-k or r*-j to throw *bel(-t) to throw to	*kal-	-

94. GIRL

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
–	dongadi , pl. dungada , or dongode , pl. dunguda (R) dung-goo-di (Salt 1814; = /dangudi/) dònggòdì (CRk) (< *dun + *kadi, see CHILD and WOMAN)	*taar	*mein	–

95. DAY OF 24 HRS

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
Ⓐ *ugur	kos day, sun (R) kòòs (CR)	*ugur (see NIGHT)	uru (Tama)	ḡórí (Nyimang)

96. MILK (see also BREAST)

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
Ⓑ *er-	sa (R) sàà (H, CR) hùnn- to milk (CRh)	*ijji < *ij-ti (?)	*ji-gu (with collective suffix, but possibly a loanword from Maban languages, e.g., Aiki <i>jùk</i>)	*elo (see BREAST in Nubian)

97. SPEAR, SWORD

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
Ⓐ *mbar-ε	madet (R) sayif (T) (< ar.) sword làá spear (CR)	*gora- spear (West) East: loanwords for “sword,” see IRON for “spear”	*bara spear, war	–

98. LANGUAGE, WORD (see also TO SAY)

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
Ⓐ *baj-	bena (R) bànà (T, CRh) bòònà (CRm, s)	*baj-	*boj-	? *baṭa

99. TONGUE

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
Ⓑ *ɣal (sg. -ti)	hàggà (R, CRh) àggà (CRk) ààdà (CRm) hàdà (CRs)	*ɣal, sg. ɣal-di	*laat	?

100. TO CLEAN

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
Ⓐ *sug-	sibe, sübe (R) subin (B) sūb- (CRh, k) sâf- (CRm, s)	*suug- *jeleb- (< ? *jaar THING + *eeb- TO BATHE, see these entries)	*eeg- (see TO BATHE)	*ti-gel- or *i-gel

101. TO JOIN, TO ATTACH

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
	hadi (R) hádà- to attach (A) tèès- to join (CR)	*dig(g)er- < *dig to be bound + auxiliary factitive -ker	-	-

102. SILT, CLAY

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
Ⓐ *log-	kèrfé (R) kàrfè clay (CR) log (B) lòg (R, CRh, k), lògò earth, land (CRm, s)	*sib-i, sg. sibi-di clay, sand (< *sab-i with a vowel attached; the root is conserved in “wall” built originally with brick) *noog (NK and Old Nubian or Nobiin)	-	*log- mud

103. LION, LEOPARD

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
③ *ḡgawo (?) lion	deregem (R), dèrègàm (CR) lion (the resemblance to rare and poetic Arab <i>ḡarḡam</i> “lion” is probably a coincidence)	*koo lion *dagir (vocalization ?) leopard (preserved in the West)	–	*ṭuwer- leopard
③ *deger leopard	kèssèl’ leopard (H)			

104. LONG

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
③ *las-i	gir-ko, giren-ko (R)	*nass-i (expressive gemination?)	*lasi-k	–
③ *ḡgir-	ngíír-kù long, big, high (H)			

105. HEAVY

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
© *díl-	dálu-ku (B) dúllùk-kù (CRh) dúrkáákkù (CRm)	*dill-e (expressive gemination?)	*kuni	–

106. LIGHT, LIGHTNING

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
③ *mbile (sg. -ti)	minni lightning (R) mìlḡó (CRh) bálác (CRm) míléc (CRs)	*bilit-ti to sparkle (< *bil(l)-)	*(me)mered-	*(sa)salag sheet lightning

107. MOON, MONTH

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
–	feta (R) fèètà (CR)	*un-	*agit-	*keru (vowels are less certain)

108. HAND

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
Ⓐ *ad-i	ad (R) aat (B) ààt , pl. ààtà (CRh, k) ààti , pl. ààtà (CRm, s)	*es-i hand(s) *di- (fossilized element in FIVE and TEN)	*(a)wei (rather “arm”)	*adi (?)

109. HOUSE, LIVING PLACE

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
Ⓐ *wal-i	wol (R) wal (T) wòl' (H) wól (CRh) wòṛ (CRs)	*kar (see ENCLOSURE)	*wal-i	*wàl-i *wAl- (?) (Bender 2000)

110. TO EAT

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
Ⓑ *kal-	kal (R, T, A)	*kal-	*ḡan- (complex conjugation)	*ṭàl-
Ⓑ *kamb-	kál (CRh) kár (CRs) kálo food (A)			*tám-

111. TO WALK, TO PASS (see also TO GO)

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
Ⓐ *log-	gel- (R) gààrùn- (CRh, k) to walk, to walk about loge to hurry, to run (R, not recognized today)	*nog- or *nog-j-	*log- (?) to go (complex conjugation of a suppletive form) *kadig- to walk, to trample (see FOOT in Tama)	–

112. BAD

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
Ⓐ *kos-	koʃ-ko (R) kʷaʃ-ku (B) koʃ-kù (CRh) ʃitàà-ù (CRm) ʃàttà-gù (CRs)	*kuus ~ uus (East) *meel- (< *m-eel- or *ma-el- “not good,” cf. GOOD in proto-Nubian)	-	-

113. MOTHER

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
Ⓐ *ɛn-ɔn	anen (R) ánìn (B, CRh) ánìn mother, woman (H), pl. ànìná (AH) ndéé, pl. ndèènná (CRm, s)	*éen ± suffix of kinship -Vn	*unon	*Vɲa(ɲ)

114. MILLET, DUKHN (SMALL MILLET, *PENNISETUM*)

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
Ⓑ *er-	bàrtùú (CRh, k) gèértà small millet (CRm, s) elbi sorghum (see also that entry) (< *el-bi ?)	*ernde *ernde (BG) (the strange syllabic structure suggests a genitive: *er-n-de)	*iwi- (< Nubian “sorghum,” see that entry)	-

115. MOUNTAIN, HILL

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
Ⓑ *kur	je (R)	*kuur (cf. STONE)	*kur-	*mòḍég
Ⓑ *mode(r)	jèé ~ dèé (CRh) dèé mountain (CRm, s) koofa (B) kòòfà hill (H)	mùlée (Nobiin)	*kad-	

116. TO CLIMB

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
© *ker-	kol (R) kóòl- (AH, CRh, k) kóòr- (CRm, s)	*keer-	*seg- (?)	*tàn- *-nq̄ir

117. TO BITE

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
–	des- (R) dəs- (B) dâs- (A, CRh, k) dâît- (CRm, s)	*ajj-	–	*ɣwuɖ- (initial not certain)

118. FLY (see STAR)

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
Ⓐ *wije (sg. -ti)	wini , pl. wint-te (R)	*unde , sg. unde-di ~ undu-di (preserved in the West)	*mije , sg. mijeti fly, star	*kòlV-ɣ (with collective suffix -ɣ/-k)
Ⓑ *kul (sg. -ti)	wíínì , pl. wííná fly, star (H)			

119. TO DIE

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
Ⓑ *di-	di , de (R) d- (T) dèè ~ jèè death (CR)	*dii- *dii-ar death	*ii-	*lɔ *lue

120. SHEEP

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
Ⓐ *k-ur (with an old collective prefix for movables)	du , pl. duta (R) dùù , pl. dùùtta (A) (see cow) kúrà flock (R, CR; perhaps simply the “stick” used to count the animals, see STICK)	*eged (loanword) *kur- ~ *ur-ti (with a semantic shift toward “goods”)	*kuri(-ti) ~ *ur-	–

121. NINE

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
–	lefetemada (R) lufettemada (T) lùfàttémàdàà (CRh)	*iskolda ~ *oskolda (<*is “other” – cf. prepositional Old Nubian ɛic – and *kólóda “seven,” with reference to the openings in the body, see SEVEN)	*uku	–

122. NOSE

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
⑨ *em-u (sg. -ti)	demmo (R) dəmmo (B) dàm̀m̀m̀ò (AH) dòmmò (CRM, s)	?	*eme, sg. emi-ti	(o)muḍ-(?) Nuṭ- (?) (Bender 2000)

123. BLACK, DARK

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
⑨ *sur-	sur-ko (R) fur-ku (B) sùùr-kù (A)	*ur(r)-i	*kidi-k (adj. suffix -k, see WHITE , RED)	*te-biV

124. NAME

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
⑨ *(ŋ)er-i	ade (R) ààdà (B, CR)	*eri	*(ŋ)aat, pl. *(ŋ) ari-g	*áŋêr (Nyimang)

125. NUMEROUS

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
⑨ *dag-ur	mesa-ko (R) m̩əsa-ku (B) m̩úsaákkù (CRh, k) dehe-gi (R) d̩éégí together (CR)	*digir < *dagir (East) – (see BIG) West: see FULL	–	*digul-

126. NVEL

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
① *gurw-	firo (R, CRs) fúúré (A, CRh, k), pl. firto (R) ílfó (CRm)	*gurw-e-(n)-di (with dim. suffix * (-n)-di)	*(a)gol-	*gúrwí

127. WE

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
① *a-gi	heiga (R) àggà (T, B, CRh) (< older form of the acc. *ag-ga?) he [sic] (R) dative/ genitive, àwàà (CR) Other dialects: àyà (CRk) àgù (CRm) àgì (CRs)	*agi (with determinant -r in the East; /d/ for *g in Birgid and Midob for dissimilation in the accusative *agi-gi > *adi-gi) *a-gan(na) genitive	*wa-gi *o-g-un genitive	*agi *o-w-uj genitive

128. NEW

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
② *mer- ~ *per-	wor-ko (R) wòr-kù (CR)	*eer	*(a)suu	*per-

129. CLOUD

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
③ *nas-i (sg. -ti)	làsòòb (CR) (< Tigré) nàrá (CRh, different from sky)	*naj-i, sg. naj(i)-di	*(m)ar- (?) (± a second initial velar element)	*nes-

130. NIGHT

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
③ *owar (?)	kife (R)	*ugur 24 h day	*or- night	*túnì
③ *tun-evening	kíŋja (B) kíŋjà (CRh)	(only for “night” in KD and Midob, innovations in NK and Birgid because of possible confusion; see DAY)	*ori-V evening	

131. EYE

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
④ *map (sg. -ti)	no (R, T, B) nòò (H), pl. no-ta (R) nóó-tà (A)	*maap, sg. mip-di (< *map-ti) (East and Midob) *kal-e, sg. *kal-ti (Kordofan and Birgid)	*me-ti, pl. *mVŋ	*ǎŋV

132. EGG

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
④ *kumbe (sg. -ti)	ware ~ wari (R, B) wáárì (H), pl. ware-ta, wara (R) wáará (H)	*gos-kal-ti ~ *gos-kal-ti (a compound perhaps meaning “the one who has a bowl,” i.e., the proper receptacle for food; *gos-i “bowl” is proto- Nubian and not a loan from Arabic).	*kube, sg. *kubi-ti	*dómì

133. BIRD

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
④ *ka-wer (sg. -ti) (with old movable collective prefix)	kárbà (R, CR) kàrba (B), pl. kàrbà (H, CR) kábírà, pl. kàbirkà (CRs, only form without metathesis)	*ka-wer-e, sg. *ka-wer-ti	*weege, sg. wegi-ti (< ? *werge < *wer + *ka with metathesis or the suffix *ka?)	*wórdù *(w)ór(d)- (Bender 2000)

134. NAIL

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
© *suŋ (sg. -ti)	ʃí (R) ʃí (H, CR), pl. ʃíta (R) ʃùttá (AH) ʃígí, pl. ʃígá (CRm)	*suŋ-u-di ~ *sun-ti (collective is lost)	*ŋus-a-ti, pl. *ŋos-on (?) (see HORN and TOOTH)	*fal-

135. EAR

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
⑥ *nog-ul (sg. -ti)	tús, pl. túsá (R,T, AH, CR)	*ugul(-e), sg. *ugul-di (metathesis except in Birgid)	*(ŋ)usu-ti (sg)	*ɲəgər- *ɲogor (Bender 2000)

136. BONE

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
⑥ *kes-er (sg. -ti)	ketti (R) kəti (B) káti (AH), pl. ketta (R) káta (A)	*kiser, sg. *kisir-ti	*kei-ti, pl. *kei-ŋ	*amV (cf. Temein àm- is, Surma Baale émmé, etc.)

137. TO OPEN

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
© *kog-	hōg- (R, CR)	Three synonyms present in each language: *kag- *ŋal- *kus-	-	-

138. TO SPEAK (see also TO SAY and LANGUAGE)

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
-	mes, imper. men (R) mán- (T, CR) yáán to shout (CR, imper.)	*bap(p)-	-	-

139. SKIN, LEATHER

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
–	hadi (R) hàdúí (H) hàdúí (CR) (< Beja <i>ade</i> ?)	*noor (West) (? proto-Nubian *nawer if Old Nubian and Nobiin have a Nubian root)	*gil-	*lum

140. FATHER

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
Ⓐ *ab-ɔn	aben (R) àbìn , pl. àbbinná (CRh, k) àbbá , pl. àbbinná (CRm) abba (R), àbbáà father! (term of address) (CRh)	*baab(-Vn) , (doubling of the root?) *aboo my father	*anon (< *abon analogous to MOTHER?) *abba term of address	*Vba(ŋ) *ábà my father (term of address)

141. PERSON, HUMAN BEING

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
Ⓑ *ar-i (sg. Ⓐ a(r)-ti)	aite , eite person, -self as in “myself,” etc. (R, see BODY) ku (R) kúú (AH), pl. kua (R) kwàà person, man (male) (H)	*íd , pl. *ir	*at , pl. *ar-i	*wid (?) *wad (Bender 2000)

142. SMALL

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
–	nik-ko (R) níkkù (CRm) níf-kà small, young (CRk) ǰín-kù (H, CRh) kwador-ku short (B) kùdùùr-kù (CRh, m)	*nor-e	*gur- short	*ka-ti- (?)

143. NOT MUCH (LITTLE, FEW)

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
–	kam (R, actually “thing”) arima (R) aruma (B) àrúmmá (CR)	*maap- (< *ma-eeṗ literally “not full” (Dilling and Birgid) (see FULL)	*ma not + numerous (various adj., see NUMEROUS)	–

144. (TO HAVE) FEAR

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
⑨ *kor-	korsei (R) kʰoray- (B) kòrí fear (R, CR)	*sar- ± suffix *-k *er- (Old Nubian and NK)	*oog- ~ *aag-	*torV

145. FOOT, LEG

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
⑩ *mar-	bàllà , pl. bàllá (R, CRh) bàrtà (CRm, s) bàttà (CRk) hóg , pl. hòkkà tibia (CRh) màgáàb thigh (CR)	*os-i , sg. os-ti *ko(o)r-um leg (uniquely attested in the West)	*mar or *war leg (correspondence between Tama /m/ and Mararit /w/ is irregular)	–

146. ROCK (see MOUNTAIN)

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
⑪ *kur-ti	tane (R) tààná , pl. tàànná (A)	*kur-ti < *kuur + *ti , lit. “child of the mountain” (see MOUNTAIN ; numerous parallels in the languages of the region, e.g., Maba)	= MOUNTAIN or “child of the mountain”	*midr (?) (see MOUNTAIN)

147. FULL

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
–	músèè-gù (CRh) ebe-ḟi (R) èb- to fill (R, CRh) ín- to pour in (CRh)	*eeṗ-	*binj- *age (here only in Sungor; see SMALL)	?

148. TO WEEP

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
③ * oj-	wüs- (< *wun-s) wùn imper. (R, A) ùn- (CRk)	* oj-	* won- ~ * wan- (< * on-)	* tur-

149. RAIN (see also SKY)

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
④ *(ŋ) ar-ε	hala (R, B) hàlàá (CRh, m) hàrà (CRs)	* ár-e	*(ŋ) ar-u	* ár-ŋV

150. DOOR (GATE)

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
③ * agil ~ * agul (= MOUTH)	aure (R) aúra (CRh), cf. MOUTH	* agil (= MOUTH) * ka(a)l (West)	compound with the first element * kir- ?	-

151. TO CARRY, TO LIFT

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
③ * sog-	songi (R) suŋ- (T) sòŋŋ- to carry, to take (away) (CR)	* sokk- (? < *sog- + suff. *-k / *-g)	-	* T-ur or * ur to take (away)

152. LOUSE

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
③ * siŋ (sg. - ti)	ʃitti, pl. ʃiti-ta (R) ʃíti (AH), pl. ʃíta (CR) ʃídmaára (CRh) ʃintàkàrì nit (CRm)	* is-i , sg. * is(i)-di (only the singulative has remained) * is-ti (Jakobi 2006)	* si-ti , pl. * siŋ	* wùnV (see FLY)

153. TO TAKE, TO LIFT

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
④ * mej- ~ * jep-	hìnd- (R, A, CRh, m, s) hin- (T, B)	* ej- ± pl. suffix * -g or * j	* ej- to take, to marry	-

154. FOUR

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
–	before a noun: ḥòón (H, CRh, k) ḥèén (CRm, s) after a noun: ḥone (R) ḥoona (T) ḥòónà (H, CRh, k) ḥèénà (CRm, s)	*kem(-n)-si (compound, perhaps “collection (?) of articulations,” being two elbows and two knees, cf. proto-Nubian *kew-i elbow, articulation) *kemsī (Jakobi 2006)	*kus (perhaps influenced by Nubian)	?

155. WHAT?

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
–	endeḥa (R) nda (T) ndaá (CRh) ìntíí (CRm, s)	*min (East) *naa or *nee (West)	*num	*VḡV

156. WHO?

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
Ⓐ *ḡa	na, nan (R) na, naanan (T) náá (AH, CR)	*ḡàa-i	*na	*ḡá

157. TO COME BACK

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
Ⓑ *wigi- (?)	fipi (R) fiḡḡ- (T) fiḡin- (CRm) fiḡḡi with news (AH)	*wiid-	*worok-	*mun or *min to go back

158. TO LAUGH

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
–	bes (R) bəs (B) bàs- (CR)	*gVr-	*son- (?) *wal- (?)	*ḡi- (?)

159. RIVER, WADI

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
–	hattara (R) hàtàrà (B, CRh, m)	*iwer(-ti)	*bVr- (± collective suffix) river *agiri (?) pool	*kɔl- wadi, khor (a stream that often runs dry)

160. RED

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
Ⓐ *sar-	ʃol-ko (R) ʃòól-kù (A, CRh, m)	*geel-e	*ara-k (adj.suffix -k, see WHITE , BLACK)	*gɪlV (< Old Nubian) sál sál very red (Nyimang)

161. BLOOD

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
Ⓑ *ug-er	kitto (R, T) kìtò (B, A, CR)	*ùg-er	*agi	*wule

162. TO KNOW

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
© *is-	eʃ- (R) ɪʃ-ey (B) ís- (A, CR)	*ier- (< *is-er)	*nal- (cf. Nubian TO SEE)	*mai (imperf.)

163. SCORPION

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
Ⓑ *saŋ-er	sallo , pl. salitta (R) sólló (A, CRh), pl. sóllóttà (A, CRh) sótóró , pl. sòtòrtá (CRm, s) sáldó , pl. sáldóttà (CRk)	?	*saŋir	*uno-ŋ (with a collective suffix)

164. DRY

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
–	dis (R) dise-gu (B) dìssèè-gù (CR)	*sop- (?) to dry (intr.) *sopu-di (?) dry *sop-ger (?) to dry (tr.)	*lawá- (?) to dry out	*fər *far- (Bender 2000)

165. BREAST, CHEST

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
–	kena , pl. kenatta breast (R) kìnàá , pl. kìnààttá (CR) nàhâr chest (CR)	*og-i chest *er-ti breast(s) (see MILK)	*bul chest *juud breast (see MILK)	*kase

166. SALT

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
–	sənda (B) sándà (CR)	–	*kiwe	–

167. TO SOW, SEED

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
Ⓐ *ter-	feres to sow (R) feren- (CRh) èlyì seed (CRh) hèlgà (CRm)	*teer- to plant	*tìr-d- (?) to sow *teri herb	tù to sow (Nyimang)

168. SEVEN

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
Ⓑ *kol- (< HOLE)	jariga (R, T) jààrìgà (CRh) dáàrù-gà (CRm) dáàr-àà (CRs)	kòlòda (compound that includes the word HOLE , *kul ~ *kol , which points at the seven orifices of the head, see NINE)	*kol	–

169. SNAKE

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
Ⓒ *wis-ti	wòsò , pl. wòs-tá	*kaɣ(-ur) ~	*awi	*sóm
Ⓑ *kəŋg-	(R, B, A, CRh, k, s)	*koŋ-ur *wis-ti (East)		*sam (Bender 2000)

170. SIX

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
–	data (R) dáátà (T, CR)	*gorji (the second element is perhaps the same as in FIVE)	*tor	–

171. SISTER

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
© *kadi-ti ~ *kedi-ti “child of the woman”	kede (R) kàdè , pl. kàttá (CR)	*kege-di (< *kedi-di with dissimilation, cf. WE , preserved in Birgid and KD, elsewhere in “aunt” or “nephew,” replaced in the East and in Midob by *eenes(ti) < proto-Nubian *een- as(ti) , lit. “the girl of the mother,” see DAUGHTER)	Two different roots (?): *ai- and *asa (< Nub. GIRL ?)	Same word as BROTHER

172. THIRST, TO BE THIRSTY

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
⑥ *mer-e ~ *jer-e	düreb-sei (R) darab- to be thirsty (T) dàrbà thirst (CR)	*éér	*kal(a)-ŋa (< *kal-ago “hunger for water,” see WATER and HUNGER)	*mèr-í

173. SUN

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
④ *mas-i ~ *jes-i	kos (R) kòòs (B, CRh, m,k)	*ees-i	*ari (cf. SKY)	*jig-

174. SORGHUM, DURRA (LARGE MILLET)

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
-	elbi (R) èlbí , pl. èlbá (R, CR) (see MILLET , DUKHN)	*usi , sg. *usi-di (intervocalic *-s- only preserved in Birgid; the resulting form *ui has been resyllabified into *iwi in the East)	*kari , sg. *kari-ti (the first vowel is not certain)	*mVnV-g *man-ak (Bender 2000)

175. TO GO OUT

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
© *bal-	kùl- (R, CRh) bel (R) bāl-dà (CRh), bārdà- to fall (CRm)	*bal-	*us- (imperf.) *ud- (?) (perf.)	*ul-

176. DEAF

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
–	maueno-go (R, lit. “the one who does not hear”) kóffèè-gù (AH)	*ter(i)gi *terig (Jakobi & Kossmann 2001)	*andu	*mVni-g

177. MOUSE, RAT

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
© *seg-er (sg. -ti)	fèè (AH, CRh, k), pl. fèè-tá (H)	*is-kin-ti (compound with	*kiNe , sg. *kiN(e)-ti	*kínà
Ⓐ *kij-e (sg. -ti)	(< ar. <i>faar</i> ?) ǰáktà , pl. ǰáktàtá (CRm) ǰégátá , pl. ǰégátàttá (CRs)	suffix sg. *-ti ; first element is unclear: see NINE ?)		

178. STERILE

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
© *m-ar- “who cannot give birth”	mella-go (R) mállàà-gù (CRh)	*miir (< *m(a) negation + *ir TO GIVE BIRTH)	–	*nagVr

179. BULL

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
Ⓑ *gur-	bero , pl. borto (R) bòrò , pl. bòrá (CRm, s) hábnáá (CRh)	*gur	*muger (NES root that indicates a dangerous animal, see HYENA and Nyimang <i>móguír</i> baboon)	–

180. HEAD

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
Ⓐ *(ɣ)ur-	kele (R) kèèlà , pl. kèèllá (AH, CRh, k) kèrà , pl. kèrtá (CRm, s)	*ur	*(ɣ)ur-	*ɔr-

181. WORK, MATTER, THING

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
© *gar-	gar (R) ʃànáà work (CRh, k, m) kâm , pl. kámá thing (CR)	*jaar	–	*kí thing; loanwords for “work”

182. THREE

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
–	before a noun: sàán (H) sàán (CR) after a noun: sane (R) sa:na (T) sàánà (H, CR)	*tossi-gu (originally a plural of an obscure noun)	*atti	? *astu(-b) < *astu(-g) (reconstruction is weak)

183. HOLE, WELL

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
Ⓑ *kol	dèrè , pl. dèr-tà well (R, CR) kòllò hole (A, CRh) kòttò (CRk) kòrtò (CRm)	*kul or *kol	*kul	–

184. YOU (sg.)

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
Ⓐ *i	enga (R) íggà (CRh) (< *en-ga old accusative ?), gén. ḡgá Other dialects: ḡkà (CRm) íggà (CRk) ìggì (CRs)	*i- or *in- ± determinant *-r, gen. *in(na)	*i, gen. *i-nu	*í, gen. *i-uḡu

185. TO KILL

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
Ⓑ *si-	si (R) sii (B) síi-tè I have killed (A) síi-tò he has killed (H) sá-àdò (CR)	*ber-	*sie-	*ni

186. ONE

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
-	before a noun: túr (H) after a noun: doko ~ toko (R) dokku (T) doku (B) dókkù (H)	*weer	*kura	-

187. URINE

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
-	túsà (R, CR)	*erde (Birgid, Midob, and Nobiin) *erk- (< *erd-k- ?) (KD and NK)	*leg-	*ibisa

188. COW

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
⑨ *teg-i	ààr, pl. ààr-à (AH, CRh, k) ààrì (CRm, s) (see also SHEEP)	*tegi (?) ~ *tei (see SHEEP)	*te , pl. *tigine	*bàr

189. TO COME

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
⑨ *tar-	tíl , tül (R) tʰo- (B) till- (A) tíl- to reach (CRh, s)	*taar-	*or- imperf. *kun- perf.	*ṭar or *kuḍ- (?)

190. STOMACH, UNDERNEATH

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
⑨ *tag-	taua ~ daua (R) táwà stomach (T, CRh, k) tolko ~ dolko (R) tòl'k (H) tòl-kà under (CR)	*tuu < *tag- (preserved in the postposition “under”)	*tolol or *totol (< *tol expressive doubling)	*busi

191. WORM

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
⑨ *worg-e (sg. - ti)	woli , pl. wolit-ta (R) wòlí (CRh) hòlǵí (CRm) wùrí (CRs)	*wirge(-di) *birgedi (BG)	*wige , sg. wigi-ti	*am-V

192. GREEN

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
⑨ *sir-	ṣilman-ku (B) ṣílmáán-kú (CRh) ṣírmáá-gù (CRs)	*desse (see FAT ; the idea of abundance?) *sir-i grey, brown	*sir-ni	–

193. CLOTHING

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
© *kut-ti	kute , pl. kutta (R) kùùtì , pl. kùùttà (CR) kut-ei (R) kùtt-àg- to dress up (CR)	*kade , sg. *kit-ti (< *kad-ti)	various loanwords	probably loanwords from Nubian languages

194. MEAT

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
© *kos-i	no (R) nòòtí (A, CRh, m) nòò (CRk, s) kassa (R) kàsà fat (B, CR)	*kos-i	*isa (< daju)	*kún

195. OLD (see also BIG)

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
⑧ *mbar-	mergen (R)	*baar-	*mariḡ	*gor-
⑧ *ḡgor-	murga (T) mòrgá-gù (of persons) (CRh) wisu-ku (B) wùssùkkù (CRh) ùḡḡikkà (of things) (CRk)	*duri (cf. BIG)	*bara-k (suffix adj. -k , see WHITE, RED) (< Nubian ?)	

196. FACE

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
⑧ *k-ɔp- (old pl. of EYE)	notel (R) nóóttàl (CRh) nóóssàl (CRm) (< nòò eye) gad (CRh)	*kop(pi)	*kemil	–

197. TO LIVE

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
–	ken-ei (R) kèén- (CR) wod- ~ ud- to exist, to be there (R) wùd- (A)	*áap-	–	–

198. TO SEE, TO LOOK AT

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
Ⓐ *ɣal- to see	let- (R, T) let- (B)	*ɣal- to see *guup- to look at, to observe	*gun- or *gud- to see (perf.)	*tigol- (?) to look at
Ⓑ *gup- to look at	lát- (H, CRh) to see tá- , imper. tû (CRm, s) kod- (R) kòôt to watch (CRh)			

199. TO STEAL, TO ROB

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
Ⓑ *m-ar “to take badly”	mele (R, today no longer found) hòòl- (R, CRh) hògòl- (CRm, s)	*marg- < *m-aar-g “bad” (pref. negative) + to take + extension (cf. TO TAKE)	*ɣun-	–

200. YOU (pl.)

proto-NES	Nara	proto-Nubian	proto-Taman	proto-Nyima
Ⓐ *i-gi	engane (R) ih’ɣa (T) ìhɣà (CRh, k) (< older form of the accusative *ihg(i)-ga ?) dat./gen. engo (R), ngwá (T, CR) Other dialects: ɣgù (CRm) ìhɣù (CRs)	*igi ~ *ugi (with determinant *-r in the East) *igin(na) ~ *ugin(na) gen.	*i-gi (see YOU (sg)) *i-gu-n gen.	*i-gi *i-w-uh gen.

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